Medicaid Program Evaluation

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Medicaid Program Evaluation

Cluster II: Inpatient Hospital Reimbursement

MPE Paper 3.4

May 1985
April 1987 (revised)

MEDICAID HOSPITAL REIMBURSEMENT IN NEW JERSEY
UNDER A DRG ALL-PAYER SYSTEM

Michael Koetting
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Department of Health and Human Services
Health Care Financing Administration
Office of Research and Demonstrations

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PREFACE

The Medicaid program, which finances health care for over 20 million needy Americans, has undergone major changes since 1981. Beginning with the Omnibus Budget Reconciliation Act of 1981 (OBRA), Congress gave the States much more flexibility to change basic parameters of the program, including which groups of people are served, which services are provided, how doctors, hospitals, and nursing homes are paid, and how care can be organized in innovative ways.

The Medicaid Program Evaluation addresses the implementation and impact of selected changes in the Medicaid program to provide knowledge for policy assessment and future legislative change. It is focused on selected issues and policy questions raised by recent legislation. The three-year evaluation includes nine major study areas:

- Federal Financial Participation
- Inpatient Hospital Reimbursement
- Eligibility
- Case Management
- Home and Community-Based Waiver Program
- Cost-Sharing
- Financial Incentives for Family Care
- Medicare PPS Effects on Medicaid and
- Synthesis.

Together these studies are intended to describe how recent changes have been implemented and analyze what their effects have been for program services and costs.

This document presents a case study of the Medicaid inpatient reimbursement program in New Jersey under a DRG all-payer system, as part of the Inpatient Hospital Reimbursement project. New Jersey's DRG system is of special interest to policy makers, as it was the first DRG-based reimbursement system in the country. The study reported here evaluates implementation and operation of the New Jersey system and draws lessons from that experience for policy makers, including policy makers interested in the possible implications of New Jersey's effort for the Medicare Prospective Payment System (PPS).

ACKNOWLEDGEMENTS

It is not possible to list individually all the people who cooperated in the production of this report, most particularly the state, hospital and insurance company personnel who took time out from their busy schedules to meet with us and offer their frank and knowledgeable opinions concerning hospital reimbursement under DRGs in New Jersey. Without their thoughtful help, however, we would not have had any report and we are deeply grateful.

We do not believe we will violate our pledge of anonymity for respondents by offering special thanks to officials of the State of New Jersey who were particularly hospitable and cooperative over the last year. These include Tom Russo, Ron Kavas, Carl Skowronek, Charles O'Donnell, and Irv Weiland of the Department of Human Services; Joe Morris and Scott Crawford of the Department of Health; Allan Rosenberg and Pam Dickson of the Hospital Rate Setting Commission; and Stephen Fillebrown at the Center for Health Facilities Research.

We also gratefully acknowledge the help of Gerald S. Adler, our HCFA project officer, who has provided support in numerous technical and logistical areas.

Finally thanks to Georgette Wright, Sharon Snyder, and Deborah Welch, our production secretaries.

NOTE ON 1987 REVISIONS

The first seven chapters of the following report were originally written in May 1985. Those chapters appear in this report virtually unchanged. The principal addition to this work is a new concluding chapter (Chapter 8). This new chapter builds on the original work, while taking account of the data analyses completed by Abt Associates since 1985, as part of the Hospital Inpatient Project of the Medicaid Program Evaluation. (These subsequent data analyses examined the outcomes of Medicaid inpatient reimbursement innovations in New Jersey and other states and are summarized in Stephen T. Mennemeyer et al., "Inpatient Hospital Reimbursement" (Draft), Abt Associates Inc., Cambridge, MA, May 1987, MPE Paper #3.8.)

EXECUTIVE SUMMARY

Medicaid Hospital Reimbursement in New Jersey Under a DRG All-Payer System

The most dramatic single reform in Medicare hospital reimbursement took place in 1983, when Medicare started the transition from retrospective, cost-based reimbursement to a prospective reimbursement system based on Diagnosis Related Groups (DRGs). Since that time, a number of states--including Utah, Pennsylvania, Ohio, Washington, and Michigan--have adopted DRGs as a basis for Medicaid hospital reimbursement. Both the Medicare system and the Medicaid programs using DRGs are, to some degree, descendants of the very first operational DRG program in the country, the New Jersey system.

This report presents a qualitative assessment of the New Jersey DRG system, with particular attention to the role of Medicaid. The Medicaid Hospital Reimbursement Project, of which this report is a part, includes a major case study of New Jersey, because the experience of New Jersey, which has been operating under DRGs since 1980, may be useful to other states considering the use of DRGs for Medicaid. Additionally, the experience of New Jersey as an all-payer system is useful to those states either operating or considering all-payer systems.

This report is based on more than 60 interviews in New Jersey with state officials, hospital administrators, physicians, and interest groups. The report is the fourth prepared by the Medicaid Hospital Reimbursement Project. Previous reports included a current overview of Medicaid hospital reimbursement approaches for all 50 states; a quantitative overview of alternative hospital reimbursement strategies from 1979 to 1983; and a major case study on the first year of selective Medicaid contracting in California.[1] Subsequent reports will update the national overview and the national quantiative analysis; continue the California case study and report on three less extensive case studies in Illinois, Texas, and Pennsylvania; undertake a quantitative assessment of the impact of Medicaid reimbursement changes on hospital system expenditures in New Jersey and California; and assess the impact of the California contracting experiment on Medicaid mortality rates within selected diagnoses.

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[1] J. Cromwell and S. Hurdle, National Impact Study of Alternative Reimbursement Waivers: First Year Report, Draft, Health Economics Research for Abt Associates, Cambridge, Mass., December 1984.

H. Korda and M. Koetting, State Medicaid Inpatient Hospital Reimbursement: Summary of State Programs, Draft, Abt Associates, Cambridge, Mass., December 1984.

M. Koetting and L. Olinger, Selective Contracting in California: The First Year, Draft, Abt Associates, Cambridge, Mass., December 1984.

Genesis of the DRG System

The New Jersey DRG system grew out of a long history of attempts by the state of New Jersey to regulate hospital rates directly. The system immediately preceding the DRG system was a budget review system known as SHARE, which regulated hospital rates for Blue Cross and Medicaid through a relatively stringent budget review process. Although this system was successful at keeping the rate of growth in hospital costs in New Jersey below the national average, SHARE had several less desirable side effects for Blue Cross, Medicaid, and other payers. First, since only Blue Cross and Medicaid were directly regulated, revenue shortfalls were shifted to other payers, notably commercial insurers, which resulted in uncompetitive differentials between commercial insurers and Blue Cross. Second, several inner-city hospitals with large Medicaid volume and insufficient private payers to whom uncompensated care costs might be shifted found themselves in serious financial difficulty. Hence, the political climate was ripe for a major change in hospital reimbursement.

The political mood coincided with the desire of Dr. Joanne Finley, then Commissioner of Public Health, to design a reimbursement system using DRGs, a system designed at Yale University for sorting hospital admissions into a large number of diagnostic groups with comparable resource requirements. Finley and her associates operationalized the DRG program through many political and tactical efforts involving the support of:

- the federal government, which provided developmental money;
- the state legislature, which had to pass enabling legislation;
- New Jersey hospitals, among which inner-city hospitals supported the DRG program and many suburban hospitals actively opposed it; and
- payers, among which, commercial insurors actively supported it and Blue Cross tended toward opposition.

After a series of fits and starts, the system began operation in 1980, when 26 hospitals--slightly fewer than half of them volunteers eager to get under the program--were phased into the program. Forty-two hospitals were phased in during the following year, and the remaining hospitals in 1982.

Administrative Organization

The DRG program is administered by a two-tiered structure involving the New Jersey Department of Public Health and an oversight commission, the Hospital Rate Setting Commission. The New Jersey Department of Health (DOH) is responsible for gathering cost reports from hospitals and for undertaking the major analysis and support work necessary to propose hospital rates under the DRG system. Hospitals then indicate whether they accept, conditionally accept, or reject the rate to the Hospital Rate Setting Commission (HRSC), the body with actual authority to set rates. The HRSC is a five-person independent commission appointed by the Governor to make final rate determinations in the DRG system, including consideration of all appeals by hospitals or payers.

One of the most severe administrative problems affecting the operation of the DRG system has been DOH's inability to retain rate analysts. According to respondents, civil service requirements make it difficult to offer competitive salaries for some classes of employees. At about the time an analyst really understands the system, he or she is likely to be hired by a hospital at a higher salary. This, combined with DOH's initial lack of computer capability and the staggering number of appeals that are filed each year, have made routine operation of the DRG system very cumbersome. Particularly in the early years, a large number of hospitals did not know their rates for the year until well into the year, or in some cases even until after the rate year. Moreover, reconciliations from previous years took a long time and introduced a significant amount of retrospectivity into the system, making it difficult for the state and hospitals alike to predict rates from year to year.

The Medicaid agency, which is administratively a part of the Department of Human Services, is simply another payer in New Jersey's all-payer DRG system and thus receives little or no preferential treatment. The Medicaid agency itself considers the DRG system to be DOH's responsibility and therefore devotes little analytic or policy effort to it. However, Medicaid is concerned about the impacts that the DRG system has on its costs.

The New Jersey DRG System

Like other DRG systems, the New Jersey system is designed around the 468 diagnostic groups used to classify patients into groups with similar clinical and resource requirements. Accordingly, many of the actual mechanics of the reimbursement system involve identifying costs from a base period and allocating them to specific DRGs. The New Jersey system, however, differs from Medicare and other state DRG systems in five important ways:

- Individual hospital costs are accorded a much greater weight in the development of rates, so that, as a consequence, each hospital has a unique DRG rate for each DRG, as opposed to a standard rate for each DRG.

- Outliers (primarily cases with unusually long lengths of stay) have typically accounted for 30 percent of the New Jersey cases, whereas other systems allow drastically lower proportions of outliers.

- Uncompensated care is a reimbursable cost under New Jersey's DRG system.

- All payers, including Medicare, Medicaid, Blue Cross, and commercial insurors, are under New Jersey's DRG system.

- Compliance with the New Jersey system is specifically measured against an aggregate revenue cap, in contrast with a system simply allowing the revenue collected from the DRG rates to determine the aggregate allowable revenue.

These differences reflect the state's commitment to equity among hospitals and payers. The net effect of these differences is a system much more sensitive to individual hospital financial requirements, but also much more complex and

with weaker cost containment incentives. The overall complexity of the system has been cited by many observers as one of the system's major problems.

Other issues facing New Jersey include developing a more appropriate mechanism for integrating capital costs with the rate-setting process and for reimbursing uncompensated care. Under the current system capital costs are, for all practial purposes, a pass-through cost. Shortly after the onset of the DRG system, New Jersey was faced with a substantial surge in Certificate of Need applications, most of which were granted. Although the volume of requests for Certificates of Need has subsided somewhat, concern remains that there is no overall coordination between the goals of the rate-setting process and the necessity of capital expenditures. In addition, while the New Jersey DRG system reimburses hospitals for uncompensated care, allocating this burden across all payers is somewhat dependent on New Jersey's continuing to obtain a federal waiver. Moreover, reimbursement for uncompensated care is hospital specific rather than system wide. There is potential for creating an incentive for some payers to avoid hospitals with high uncompensated care. However, in practice, payers have little leverage to direct patients to specific hospitals.

Impact on Hospitals

The major impact of the DRG system on hospitals has been to improve financial conditions for hospitals, particularly for inner-city hospitals. Hospitals have experienced improved bottom lines, improved bond ratings, and large capital expansions. Nearly every hospital in our sample has initiated a major building project since the start of the DRG program.

The impact of the DRG system on hospital operations has been decidely mixed. Most hospitals have designated a DRG Coordinator, and all have made some attempt to update their medical records departments. But the activities of the DRG Coordinator vary, as does overall hospital orientation to the DRGs. In several hospitals, extensive efforts were made to use DRGs to monitor physician behavior and to effect a fundamental restructuring of hospital decision-making processes to reflect a more aggressive product-line concept. However, in a few hospitals, the impact of DRGs has not been felt as strongly, in that these hospitals have not changed management styles or organizational patterns.

In any event, hospitals did not react quickly to the DRG system. Developing a working information system for relating costs to DRG performance, including physician behavior, took considerable time. This may have important implications for the learning curve under PPS or other state DRG systems, although it must be remembered that DRGs have a much wider acceptance now than in 1980, when New Jersey was the only state in the nation using DRGs.

In virtually all hospitals the DRG Coordinator has undertaken efforts to enlist physician support in the recording of all possible complications or secondary diagnoses on the patient record. This undoubtedly contributes to what has been termed "DRG creep." Hospitals assiduously pointed out that their efforts never involved "artificially" inflating casemix, but, like other researchers, we encountered anecdotal evidence suggesting that the problem of "DRG creep" is real. Hospitals have also tried to "game" the system by indulging in corporate restructuring to spin off certain

cost centers into independent operations. DOH has generally dealt with this restructuring by simply including such spin-offs in the rate order when the services are in fact related to the DRG rate. The issue becomes a little more difficult, however, where the services that are included in the DRG rate are provided by nonhospital facilities (e.g., a physician-owned clinic that conducts preadmission testing that was formerly conducted as part of the inpatient procedures). In some cases, this may result in a partial double payment for procedures.

Payer Impacts

Medicare has recently paid great attention to New Jersey's DRG system in relation to the Medicare waiver, which originally expired at the end of 1983, and to whether it would be renewed. HCFA disputed many of New Jersey's claims either that the system had produced substantial savings for Medicare or that it would in the future. The waiver issue was resolved in early 1985 when HCFA granted New Jersey a waiver premised on DOH projections that it would result in savings of about $231 million to Medicare over the waiver period. The waiver that was granted was different from the previous waiver in two important respects:

- Compliance with the waiver is measured against the absolute dollar amount of the DRG rates that Medicare would have paid under its own DRG system, as opposed to a criterion based solely on the rate of growth; and,

- Medicare expenditures under the waiver will be strictly monitored on a concurrent basis so that if, at any point, it appears that New Jersey is unable to meet the terms of the projections made in the waiver deliberations, payment levels will be determined by PPS--as opposed to waiting until the end of the waiver period to determine compliance.

In granting the new waiver, HCFA made no determination about compliance with the terms of the original waiver. Preliminary indications from HCFA on compliance with the original waiver suggest that New Jersey probably was found to have met the terms outlined in the original waiver. The margin below the original waiver limit would have been much greater had New Jersey not used 1982 as the year for rebasing in 1984, using 1982 as the base year increases costs above inflation. Additionally, although the issue does not bear on compliance with the terms of the waiver, HCFA questions whether the terms of the waiver were in fact an adequte measure of the rate of growth that HCFA would have experienced in the absence of the waiver.

The experience of other payers under the DRG system has been mixed. Medicaid expenditures in New Jersey have clearly grown faster than the national average, in large part because New Jersey Medicaid is now assuming uncompensated care costs and certain other financial requirements that they formerly did not recognize. Blue Cross has apparently broken even or possibly saved a small amount, while commercial insurers have apparently experienced major expenditure reductions due to the sharp reduction in cost shifting.

In terms of total system costs and expenditures, it appears that the rate of growth in New Jersey hospital net revenue per capita was lower than

the national average between 1980 and 1983. However, the effect of the 1984 rebasing was believed to be so significant that it would eliminate these savings and produce a five-year growth rate similar to that for the rest of the country. However, the data clearly reflect that the New Jersey rate of growth in net revenue per admission is substantially below the national average. Further, the growth in admissions per capita is driving overall expenditures toward the national average. Available data do not allow a determination of which factors are driving the admission rate increase, but the data suggest that the increase in admissions is not spread evenly across all payers. Despite this growth, New Jersey's admission rate remains below the national average. A complete evaluation of the impacts on total system costs requires a better understanding of the reasons for increased admissions. For instance, one might evaluate an increase in admissions that improved access to care differently than a general system wide increase in admissions.

Conclusion

The New Jersey DRG system was born out of pressures to improve payer equity and to preserve the financial viability of inner-city hospitals, as well as to control hospital costs generally. The system has proved to be successful in achieving the first two goals. On the other hand, the DRG system has improved payer equity and hospital financial viability without resulting in cost increases any larger than the national average increase during the comparable period. Whether the system can maintain this performance in the face of decidely slower rates of hospital cost growth around the country--and the new and greater pressure from the tighter Medicare waiver--remains to be seen. The rigor or cost containment stringency is primarily a function of political and administrative considerations, because New Jersey's system has all the necessary levers for controlling hospital costs, assuming they are appropriately exercised.

Changes in Medicaid costs under this system closely parallel changes in total system costs. Medicaid expenditures were greater than they presumably would have been under the SHARE system, but the increase in Medicaid expenditures represented a deliberate policy decision to achieve greater equity in rates among payers by having Medicaid share in uncompensated care and other hospital financial requirements to which it previously did not contribute. It is possible, but by no means certain, that, had Medicaid taken greater interest and initiative with respect to DRG policy deliberations--for example, arguing for a greater differential and for more stringent rulings on appeals--the program's cost impacts on Medicaid might have been less significant.

CHAPTER 1

OVERVIEW

This report examines Medicaid hospital reimbursement in New Jersey under a DRG all-payer system. In 1980, New Jersey changed from using a budget review system to using a prospective reimbursement system based on Diagnosis Related Groups (DRGs). Individual flat rates for each of 467 diagnostic groups are determined prospectively for each hospital prior to the rate year. While Medicare's Prospective Payment System (PPS) and other state programs have recently applied DRG methods,[1] New Jersey's DRG system places greater emphasis on individual hospital costs than do the systems implemented by other states or by the federal government. The state's commitment to payer equity and hospital solvency further distinguishes the New Jersey system from other DRG systems. New Jersey's DRG system applies to all payers rather than exclusively to Medicare or Medicaid patients, and uncompensated care is a reimbursable cost distributed across all payers. The state's methodology for calculating rates and blending hospital-specific and statewide costs, and its definition of outliers, contribute to the uniqueness of New Jersey's DRG system.

As the first state in the nation to reimburse hospitals on a DRG basis, New Jersey offers valuable lessons to other states considering implementation of a DRG system. In addition, both Medicare's PPS and the Medicaid

[1]Other states that have recently adopted DRGs include Ohio, Pennsylvania, Utah, Washington, and Michigan.

programs that have recently adopted DRGs are, to some degree, descendants of New Jersey's system. As such, the issues confronted by New Jersey may be encountered by the federal government or by these other states.

To date, no study has examined the impacts of New Jersey's all-payer DRG system on the Medicaid agency or discussed their implications. Other studies have examined New Jersey's experience under prospective payment systems. The National Hospital Rate-Setting Study conducted a case study of New Jersey's early efforts to control hospital costs under the SHARE (Standard Hospital Accounting and Rate Evaluation) system, a prospective budget review system that preceded the all-payer DRG system.[2] The findings from this study outlined the primary source of inequity in the system. SHARE regulated payments for only two payers, Medicaid and Blue Cross, which led to extensive cross-subsidization. Implementation of the all-payer DRG system was to remedy some of the inequities of the SHARE system. Studies have since examined the initial phases of the all-payer DRG system. One study demonstrated that the New Jersey all-payer DRG system has been successful in meeting at least one of the program's goals--that of maintaining, if not improving, the financial solvency of New Jersey hospitals.[3]

The initial impacts of the DRG system on hospital organization and management have also been examined. May and Wasserman found that the quantity and type of information in hospitals has expanded, allowing for the development of sophisticated management systems. They also found that

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[2] N. Worthington et al. Case Study of Prospective Reimbursement in New Jersey, National Hospital Rate-Setting Study Vol. VI, Cambridge, Massachusetts: Abt Associates for Health Care Financing Administration, April 1980.

[3] J. J. May and J. Wasserman, "Selected Results from an Evaluation of the New Jersey Diagnosis-Related Group System", Health Services Research 19:5 (December 1984).

management was no longer based on the costs of inputs (e.g., cost per pound of laundry processed) but was based on output, or "product," where the "products" are the different DRGs. In addition, the importance of medical records departments increased relative to other departments as coding became critical in the determination of reimbursement.[4] Another study examining the impact of prospective reimbursement programs on hospital organization and administrative behavior concluded that New Jersey's program, in particular, stands out as different from all others in terms of its administrative impact.[5] The frequency of adoption of cost containment policies is greatest in New Jersey hospitals and there is a clear pattern not to adopt ambulatory/satellite programs that might compete with traditional inpatient care (home health, outpatient surgery, group practice, and health centers). Further, this study found evidence of more centralized authority with a shift of authority from department heads and admitting staff to the hospital CEO.[6] Similarly, there is some evidence that the medical staff in New Jersey hospitals are more involved in rate regulatory matters than their peers in other states with prospective payment programs.[7]

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[4] Ibid.

[5] G. Gaumer, The Impact of Prospective Reimbursement on Hospital Organization and Administrative Behavior, Draft, Cambridge, Massachusetts: Abt Associates, May 1984. This study examines the organizational and administrative impact of prospective payment programs on hospitals as of January and February 1982 which includes two years of data under DRGs in New Jersey.

[6] This result of more centralized authority differs from the May and Wasserman results. May and Wasserman conclude that department heads have more decision-making authority. The disparity in the two findings may be due to how authority is measured. Gaumer measures authority in terms of tracer-decision influence whereas May and Wasserman focus on process measures.

[7] Op. Cit.

1.1 Medicaid Hospital Reimbursement Project

This is the fourth in a series of reports describing and evaluating changes currently taking place in Medicaid inpatient hospital reimbursement. The reports have two broad purposes: to provide a general overview of the changes taking place and to offer detailed information on possible models for Medicaid hospital reimbursement. This chapter provides a general introduction both to the entire Medicaid Hospital Reimbursement Project and to the specific report on New Jersey's DRG all-payer system.

Historically, Medicaid hospital payment has rested on two broad concepts, cost-based reimbursement and freedom of choice, which furthered the goal of the Medicaid program to increase access by the poor to mainstream health care. Cost-based reimbursement assumed that the most equitable means of hospital reimbursement for Medicaid recipients was to reimburse a share of the hospital's actual costs proportionate to the Medicaid share of utilization. Medicaid recipients would also be free, according to the second principle, to receive care in whichever hospital they wished. Thus, Medicaid recipients would enjoy the same access as any other insured segment of the population.

The Medicaid program as established around these two concepts generally worked well to increase access to hospitals for the poor. Unfortunately, as is now universally recognized, these two concepts had other, less desirable, effects. As hospital costs soared--partially in response to cost-based reimbursement--Medicaid programs had no basis either for lowering unit costs or for directing patients to less expensive hospitals.

Throughout the 1970s, dissatisfaction with this approach to hospital reimbursement for both Medicare and Medicaid grew. Demonstration waivers were granted that allowed selected states to control the rate of Medicaid growth by

directly regulating hospital payment. These programs, through a series of regulatory mechanisms, more or less dictated hospital payment through control over rates of increases in revenue or expenses, or through controlled charge structures. They continued to require special waivers, which were difficult to obtain, and generally retained provisions for freedom of choice.

In 1981, Congress adopted the Omnibus Budget Reconciliation Act (OBRA), which included the most radical changes in Medicaid reimbursement since the onset of the program. States were given the latitude to design alternative reimbursement systems and to obtain waivers from the freedom of choice provisions. With this legislation, both of the traditional linchpins of Medicaid hospital reimbursement were pulled.

The Medicaid Hospital Reimbursement Project is one of several evaluations currently under way by the Health Care Financing Administration to assess the impact of OBRA.[8] The project has two main components, a National Impact Study of changes in Medicaid hospital reimbursement and a series of case studies of individual states.

The National Impact Study considers national Medicaid hospital experience as described in the HCFA 2082 data series.[9] It offers a brief description and analysis of readily identifiable trends. The purpose is to determine whether states with some form of alternative reimbursement for their Medicaid program generally have expenditure increases less than those with traditional systems. The first national impact report covered changes made

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[8]Other evaluations focus on alternatives to long-term care, results of eligibility changes, and examples of primary-care management systems, among other aspects of the OBRA changes.

[9]HCFA 2082 forms are annual reports by states to HCFA detailing their expenses for the reporting year.

through 1982.[10] The report will be updated in 1985 to include changes made through at least 1984. In addition, a national survey was conducted profiling each state's Medicaid hospital reimbursement system as of October 1984, including types of trend factors, volume adjustments, and reconciliations.[11] This summary of state programs will also be updated in 1985.

Complementing the national overview of the Medicaid Hospital Reimbursement Project is a series of case studies on individual states. Two in-depth case studies have been conducted. The first study examined California's selective contracting program.[12] The second in-depth case study is this report, examining New Jersey's DRG all-payer system. Additionally, there will be three less extensive state case studies of emerging program changes in Pennsylvania, Texas, and Illinois.

The California hospital contracting program was chosen for study because it is one of the most innovative approaches to hospital reimbursement yet enacted; no other program takes as much advantage of the new latitude given to states by OBRA. The New Jersey DRG program was chosen because it is the only Medicaid program that has reimbursed on a DRG-basis long enough to develop sufficient outcome data. With the extended use of DRGs by Medicare, more states are considering DRG approaches for Medicaid. Sites for the less extensive state case studies were selected for a variety of reasons. Illinois was chosen because it is the only state attempting to implement a contracting

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[10] J. Cromwell and S. Hurdle, National Impact Study of Alternative Reimbursement Waivers: First Year Report, Draft. Cambridge, MA: Health Economics Research for Abt Associates, December 1984.

[11] H. Korda and M. Koetting State Medicaid Inpatient Hospital Reimbursement: Summary of State Programs, Draft. Abt Associates, Cambridge, MA: December 1984.

[12] M. Koetting and L. Olinger, Selective Contracting in California: The First Year, Draft. Cambridge, MA: December 1984.

program similar to California's. Similarly, Pennsylvania recently implemented a Medicaid-only DRG program. Case studies in these states will provide an opportunity to consider the degree to which outcomes in California and New Jersey were a product of unique state circumstances and to what extent they were a product of the reimbursement methodology employed. Texas was chosen as the final case study state because of its unique use of a fiscal agent in the determination of Medicaid reimbursement. These three less-extensive state case studies will be conducted during 1985.

The remainder of this introductory chapter provides an overview of the New Jersey case study and of the methodology employed, followed by a description of the organization of the report.

1.2 Methodology

This report is primarily qualitative in nature. The primary sources for the report are a series of interviews with the major actors in New Jersey and an extensive review of the available literature. A second report, which will integrate extensive quantitative analysis with the qualitative data from this report, will be completed in the second year of the project.

Exhibit 1.1 summarizes the interviews on which this report is primarily based. Respondents included state and legislative staff, representatives of major interest groups, private payers, public advocates, PSROs, and other researchers. In addition, ten sample hospitals were visited by the site team. Generally, the Chief Executive Officer, the Chief Financial Officer, the Director of Medicine, the Utilization Review Director, and the DRG Coordinator were interviewed.

Exhibit 1.1

Summary of Interviews Conducted by Type of Respondent
August 1984 to April 1985

Hospital Site Visits	10
Medical Lobbies	2
Legislative Staff	2
DHS Staff[a]	8
DOH Staff[b]	10
HRSC Commissioners and Staff[c]	6
Former DOH Staff	3
Insurance Companies	2
Public Advocates	2
Other Researchers	5
PSROs[d]	3
Other[e]	10
TOTAL	63

[a]The Department of Human Services (DHS) administers the Medicaid program.

[b]The Department of Health (DOH) administers the DRG systems for all payers.

[c]The New Jersey Hospital Rate Setting Commission (HRSC) is the board that approves all hospital rates.

[d]Peer Standard Review Organizations (PSROs) conduct utilization review functions for Medicaid.

[e]Includes several other state agencies, fiscal intermediaires, an HMO, and OMB staff involved with the waiver.

The hospital sampling strategy was based on health care delivery systems rather than a random sample of individual hospitals across the state. Hospitals were selected to include all geographic areas in the state. Attempts were made to visit more than one hospital in each area. Four areas with relatively high Medicaid concentrations were targeted:

- an inner-city area,
- an urban area,
- a suburban area, and
- a rural area.

In addition to hospitals, staff from two local Peer Standard Review Organizations (PSROs), the utilization review organizations, were interviewed.

Exhibit 1.2 summarizes the hospital sample in terms of implementation group, location, teaching status and bed size and compares the sample to all hospitals in the state. It can be seen that the sample hospitals are similar to those in the state in terms of bed size, but that the sample disproportionately represents inner-city and major teaching hospitals and hospitals that were in the first implementation group. This result is not a serious concern, since most Medicaid services are in fact provided in inner-city teaching hospitals. Furthermore, hospitals in the first implementation group had more experience under DRGs than the other hospitals and were able to provide information on the early start-up of the program.

The site visits were conducted from July 1984 to February 1985 using interview protocols to structure the interviews (see Attachment A). Follow-up telephone calls in the subsequent months supplemented the on-site interviews.

Exhibit 1.2

Characteristics of Ten Sample Hospitals
Compared to Characteristics of All Hospitals in New Jersey

	Sample		State	
	Number	Percent	Number[a]	Percent
Implementation Group[b]				
Phase I	4	40	25	27
Phase II	4	40	33	36
Phase III	2	20	33	36
Location				
Inner-city	4	40	21	23
Urban	2	20	23	25
Suburban	3	30	33	36
Rural	1	10	14	15
Teaching Status				
Teaching	4	40	20	22
Minor teaching	2	20	15	16
Nonteaching	4	40	56	62
Bed Size				
1-99	0	-	3	3
100-299	5	50	42	46
300 +	5	50	46	51

Source: Center for Health Facilities Research.

[a]Represents four multi-hospital systems.

[b]Hospitals were phased into the DRG system over a period of three years. The first group began operating under DRGs during 1980, the second group during 1981, and the third group during 1982.

1.3 Hospital Industry in New Jersey

There are certain features of the New Jersey hospital industry that shape the particular context in which the DRG system has been operating. This section provides some general background on New Jersey hospitals.

Exhibit 1.3 presents basic data on New Jersey hospitals--the number of hospitals, bed size, and type of ownership--against comparable statistics for the nation. As can be seen, the state has a relatively large number of hospitals--about 100 community hospitals. Unlike the rest of the nation, however, the majority of New Jersey community hospitals are nonprofit with over 100 beds. The state has relatively few small hospitals and virtually no for-profit hospitals. These statistics demonstrate the homogenity of hospitals in the state.

While, in the aggregate, New Jersey hospitals differ from those in the rest of the nation, output measures and market characteristics are similar to those for other states in the Northeast, as shown in Exhibit 1.4. New Jersey's occupancy rate and length of stay are slightly higher than the national averages, but are quite comparable to the rates for neighboring Northeast states. The distribution of New Jersey hospital revenues by payer also closely mirrors the distribution in the rest of the country. Medicaid revenues are slightly lower and Medicare revenues are slightly higher than comparable national revenues. The payer distribution represents the growing percentage of elderly people in the state.[13]

Exhibit 1.5 displays unit cost data for New Jersey hospitals compared to the nation and the Northeast. As can be seen, expenses and net

[13]The percentage change in the aged population in New Jersey between 1977 and 1982 was 10 percent, while the nation experienced only an 8.4 percent change during the same period. (New Jersey Hospital Association, Hospital Statistics: Focus on New Jersey, 1984).

Exhibit 1.3

Selected Characteristics of New Jersey Community Hospitals Compared to the Nation, 1982

Bed Size	New Jersey[a]	United States
1-99	5%	45%
100-299	47%	37%
300 +	47%	18%
Ownership		
Nonprofit	94%	58%
Investor	2%	13%
Government	4%	30%

Source: AHA, Hospital Statistics, 1984 Edition.

[a]New Jersey has 97 community hospitals.

Exhibit 1.4

Selected Output and Market Characteristics of New Jersey Community Hospitals Compared to the Nation and the Northeast

	New Jersey	Northeast[b]	United States
Occupancy Rates, 1982[a]	81.8%	83.2%	75.3%
Length of Stay, 1982[a]	8.4	8.9	7.6

Distribution of Revenues By Payer, 1981	New Jersey[c]	United States[d]
Medicare	42%	37%
Medicaid	8%	10%
Other	50%	53%

[a]New Jersey Hospital Association, Hospital Statistics: Focus on New Jersey, 1984.

[b]States included in the Northeast include Connecticut, Massachusetts, Maryland, New Hampshire, New York, Pennsylvania, Rhode Island, Vermont, and New Jersey.

[c]New Jersey Hospital Association, Hospital Statistics: Focus on New Jersey, 1982.

[d]Derived from unpublished tabulations from AHA annual survey as reported in Ginsburg and Sloan, "Hospital Cost Shifting," New England Journal of Medicine, Vol. 310, No. 14 (April 5, 1984), p. 895.

Exhibit 1.5

Unit Costs of New Jersey Community Hospitals Compared to the Nation and the Northeast, 1982

Per Admission	New Jersey	Northeast[a]	United States
Total expense per adjusted admission	$2,335	$2,824	$2,501
Net total revenue per adjusted admission	$2,446	$2,867	$2,611
Per Day			
Total expense per adjusted day	$ 280	$ 318	$ 327
Net total revenue per day	$ 292	$ 323	$ 341

Source: New Jersey Hospital Association, Hospital Statistics: Focus on New Jersey, 1984.

[a]States included in the Northeast include Connecticut, Massachusetts, Maryland, New Hampshire, New York, Pennsylvania, Rhode Island, Vermont, and New Jersey.

revenue per admission are slightly lower in New Jersey than in the nation and are about 20 percent lower than those for the state's Northeast neighbors. Similarly, expenses and revenues per day are lower in New Jersey than in the nation and the Northeast. Thus, despite higher than average length of stay, New Jersey's unit costs are relatively low.

In sum, the hospital industry in New Jersey is quite homogeneous, having predominantly nonprofit, large hospitals with average occupancy rates and length of stay slightly higher than the national averages. However, New Jersey hospital characteristics are quite typical of the Northeast. Unit costs in New Jersey are considerably lower than in the nation and the Northeast, on both a per admission and a per day basis. The impact of these characteristics will be seen in the following chapters examining New Jersey's all-payer DRG program.

1.4 Organization of the Report

The remainder of this report is divided into six chapters. Chapter 2 summarizes the background, issues, and concerns surrounding the adoption of DRGs in New Jersey for all payers. Chapter 3 discusses DRG payment methods in general and outlines the specific steps in calculating each hospital's DRG rates in New Jersey.

The subsequent two chapters consider the process of actually implementing the DRG system. Chapter 4 considers the process from the state's point of view, including decriptions of the major organizational and tactical issues faced by the state and their resolution during the process of implementation. Chapter 5 considers the implications for the Medicaid Agency of operating under an all-payer DRG system.

Chapter 6 examines hospital behavior under New Jersey's DRG system, including changes in hospital organization, management, and financial status. Chapter 7 addresses the financial impact of the DRG system on payers, including Medicare, Medicaid, commercial payers, and alternative health plans, as well as total hospital system expenditures.

CHAPTER 2

INTRODUCTION OF DRGs IN NEW JERSEY

This chapter provides a synopsis of the background, issues, and concerns that helped to shape New Jersey's current hospital reimbursement program and describes the constituency politics that frame current DRG policy and practices. Health planning and regulatory policies, including a review of the SHARE (Standard Hospital Accounting and Rate Evaluation) program, effective from January 1976 until implementation of DRG reimbursement in 1980, are described in the following sections. Exhibit 2.1 provides a time line of significant events in New Jersey, to help organize the narrative that follows.

2.1 Early Rate-Setting Efforts

New Jersey's long history of hospital rate regulation provides an important context to the many political and technical issues encountered in designing and implementing the country's first DRG rate-setting system.[1] Political interest in hospital rate review dates back to 1961, when the Commissioner of Insurance established an advisory committee of hospital experts to assist him with budget review. By 1963 the Commissioner had established a maximum per diem ceiling for the New Jersey Health Service Plan (Blue Cross). The rate ceiling was updated annually and was intended to screen only the most expensive facilities. Hospitals requesting Blue Cross payments above the ceiling were required to submit to retrospective cost review. This early rate-setting program, in effect for five years, was

[1]Readers particularly interested in the history and implementation of the DRG system are referred to the much more detailed account found in DRG Evaluation, Volume IV-A, Political Evolution, New Jersey Hospital Research and Education Trust, 1984.

Exhibit 2.1

New Jersey Time Line

1961 Commissioner of Insurance establishes an advisory committee to assist in hospital budget review.

1963 Maximum per diem ceilings established for Blue Cross (the "New Jersey Health Service Plan").

1969 **Prospective Budget Review Program implemented by Health Research and Education Trust (HRET), an affiliate of the NJ Hospital Association.** This program continued in effect until 1974.

1971 Health Care Facilities Planning Act (HCFPA) transfers rate setting authority to Department of Health; establishes mandatory Certificate of Need program; and establishes Health Care Administration Board (HCAB) of 13 members to be appointed by governor to advise Commissioner of Health.

1974 Bureaucratic Malpractice published, claiming that HCFPA was a captive of the industry.

1975 Department of Health (DOH) actively undertakes rate setting via negotiation and arbitration.

1976 **Standard Hospital Accounting and Rate Evaluation (SHARE) instituted.** This program applied only to BC and Medicaid. It required budget review and rate setting by DOH. Preliminary prospective rates were to be subsequently adjusted to final rates (the lower of actual cost or the prospective rates).

1976 (May) Unsuccessful legislation (S-1454) to create an all payer system.

1976 (November) HCFA awards grant to design an all payer casemix adjusted system to begin in 1979. DRGs subsequently developed by design team.

1978 **(June) NJ legislature passes bill (S-446) to implement an all payer casemix adjusted system. No specific mention of DRGs in the bill.**

1979 (March) Trial DRG rates established in March involving 22 hospitals.

1979 (Summer) HCFA insists on DRG system implementation in 1980, or waivers for Medicare and Medicaid will be withdrawn.

1980 (January) All payer DRG rates issued for first cohort of 26 urban hospitals.

Exhibit 2.1 (continued)

1980	DRG Reimbursement System for first cohort begins (based on 1979 costs).
1981	Second DRG cohort of 42 hospitals phased in.
1982	Remaining hospitals phased in to DRGs.
1983	First Medicare waiver expires; subsequently extended to 1987.
1984	DRG rates rebased using 1982 costs.

administered by hospital industry representatives who negotiated rates, subject to the Commissioner's approval.

Hospitals and the state population became increasingly dissatisfied with the review system and its potential for controlling hospital costs. During the program's first year, roughly ten percent of New Jersey hospitals submitted budgets for review. By 1968, however, most hospitals in the state had exceeded the ceiling. Hospital trustees complained about the retrospective nature of the review process, cash flow difficulties resulting from long delays for cost review, and hospitals' inability to recover disapproved costs. Casemix also surfaced as an issue for high-cost hospitals that sought to justify higher per diem costs on the ground that their patients presented more complex cases and were more costly to treat. Finally, because only Blue Cross payments were subject to regulation, hospitals began subsidizing low payment rates by shifting costs to other payers.

In 1968, hospital trustees and the New Jersey Hospital Association (NJHA) proposed a prospective budget review program based on per diem rates. Implemented the following year, the new voluntary program was administered by the Health Research and Educational Trust (HRET), an affiliate of NJHA, and continued in one form or another until 1974. An Advisory Committee to the Commissioner of Insurance was established to oversee hospital budget analyses. Initially the committee included hospital trustees, administrators, and physicians; consumers and state representatives were added later.

The budget review process involved comparing each hospital's historical costs with budgeted costs, with further comparisons to hospitals of similar size and location. Per diem rates were negotiated for Blue Cross and Medicaid and were sent to the Commissioner of Insurance for approval. Hospitals could apply for retrospective review of overspending to receive

additional reimbursement from Blue Cross, but prospective rates for Medicaid were considered final and were not subject to adjustment.

The New Jersey peer review system during this period has been described as "low key and collegial," with most hospital budgets receiving approval by the Commissioner. HRET encouraged hospitals to implement improved management and budgeting techniques. For many hospitals this required considerable effort. Lack of sophistication in fiscal matters necessary for the review process resulted in considerable turnover among hospital financial officers and in much confusion overall. After several years of experience with the system, however, New Jersey hospitals had significantly improved their data processing and reporting systems and had developed financial planning and management capabilities.

2.1.1 Health Care Facilities Planning Act

As the industry-controlled program developed, the New Jersey State Legislature passed the Health Care Facilities Planning Act (HCFPA) in 1971. The legislation consolidated all health planning responsibility within the Department of Health, including authority over all hospitals and related health care facilities. In addition to establishing a mandate for a state Certificate of Need (CN) program to review proposed capital expenditures, the HCFPA broadened state authority for hospital rate-setting. The Act also called for a Health Care Administration Board (HCAB) consisting of 13 members, 11 of whom were to be appointed by the Governor. The HCAB was to serve in an advisory capacity to the Commissioner of Health on health planning and rate-setting matters.

Enactment of the HCFPA came after considerable political maneuvering and competing proposals by Blue Cross and NJHA. Invoking the hospital

franchising of the late 1960's, NJHA sought legislation that would give control of CN programs to voluntary planning councils. Blue Cross, in addition to a state-sponsored CN program, called for state control over hospital rate-setting. Having submitted two requests for premium increases in 1969, Blue Cross wanted to free itself from its considerable responsibility for controlling hospital rate increases and from its consequently adversarial relations with hospitals.

The new act favored the Blue Cross position, affording the state greater responsibility in hospital decision making. However, the HCFPA was poorly funded and the HRET budget review system remained in effect and continued to regulate hospital rates for Medicaid and Blue Cross until 1974.

Passage of the HCFPA did not alleviate the controversy over the effectiveness of the budget review system, whose perceived shortcomings included cost shifting, failure to address casemix, and the use of a per diem reimbursement method. Rates recommended by HRET for 1974 were at such a high level that the Commissioners of Health and Insurance withheld approval and called for study of alternative rate-setting methods. Hospital rates that year were allowed to increase on a formula basis.

In 1974, a public interest research group in Princeton released Bureaucratic Malpractice, a report highly critical of HCFPA activities. The report charged that HCFPA had been "captured" and that "the regulated were doing the regulating."[2] The report received widespread publicity and served as a rationale for the newly elected governor, Brendan T. Byrne, to wrest control of hospital rate-setting from HRET. One of Byrne's first moves was to appoint Dr. Joanne Finley as Commissioner of Health. She reorganized the De-

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[2]DRG Evaluation, Volume IV-A, Political Evolution, p. 16.

partment of Health, using the tenets of the public interest report as a basis for health policy reform.

Finley provided charismatic, powerful, and dynamic leadership, and her interest in DRGs was clear from the outset. As an adjunct professor at Yale University, she had developed personal and professional relationships with researchers working to develop a patient classification methodology based on diagnosis and resource consumption. Among her first acts as Commissioner of Health was the blocking of a $350,000 grant awarded to HRET, subject to state approval, to develop a casemix-based reimbursement experiment. This further established state control over hospitals, clearing the path for a state-sponsored proposal for consultants to assist the Departments of Health and Insurance in implementing an alternative hospital rate-setting program.

In 1975, the Department of Health (DOH) took over the process of regulating hospital rates. Rates during the first year were set by the Commissioner of Insurance instead of being sent to the HCAB as required by law. The rate-setting process was confusing and largely haphazard. HRET forms were used while Blue Cross definitions of cost were applied for rate-setting purposes.

In response to the state's increased control over hospital rate-setting, NJHA filed suit over delays in adjusting the 1974 rates. NJHA filed a second suit later that year, opposing the DOH 1975 rate-setting process. DOH's rates were judged illegal by the court system, and, in the absence of an alternative methodology, rates for 1975 were negotiated through an arbitration hearing. The hearing provided a forum for hospitals to air their complaints about the interim system. Once again, differences among hospitals with respect to location, service availability and intensity, and casemix emerged.

Ultimately, the negotiated rates for 1975 granted general acute hospitals average increases of 12.52 percent over the 1974 per diem.

2.2 SHARE

During this transition period a more permanent, mandatory system was being developed in response to a proposal issued by DOH in early 1974. The new program, SHARE (Standard Hospital Accounting and Rate Evaluation), was developed by contractor Haskins and Sells and closely resembled the HRET budget review system. Under SHARE, budget review and rate-setting activities were administered through the Department of Health. Global limits on rates of increase using standardized cost reports were established to set prospective per diem rates for each hospital. A hospital could agree to accept the rate or submit an appeal through a detailed budget review process.

Effective January 1, 1976, the SHARE system required hospitals to submit uniform cost summaries to the New Jersey Department of Health by November 1 of each year. After audit by the DOH, each hospital received a cash flow interim rate for the upcoming year equal to its current approved rate plus one-half of the forecasted inflation rate. Formula methods were then used to calculate initially approved rates, which were issued after the beginning of the rate year. Contested rates could be adjusted on appeal and adjusted at year end for pass-through expenses and differences between actual and expected outcomes.

A hospital's final approved rate was the actual cost or the approved rate, whichever was lower. This amount became the basis for the subsequent year's rate. By reconciling final rates in this manner, hospitals were not rewarded if costs were kept below approved levels; nor were they encouraged to overspend, since unapproved spending was excluded from future payment rates.

The SHARE budget review system is described in detail in the following section.

2.2.1 SHARE Budget Review Process

SHARE's budget review program involved screening each hospital's actual, budgeted, and projected costs and service volume and intensity to establish a PAR (Proposed Administrative Rate) for each facility. Extensive intra-hospital cost comparisons were made on a cost center basis. Until budget year 1979, only if a hospital's total budget was within three percent of prior year costs could the hospital avoid the detailed screens. As of 1979, however, hospitals could accept the global rate rather than go through budget review.

Global Rates. Global rates were calculated by DOH on an institution-specific basis, using inflation, intensity, and volume adjustment formulae to trend forward each hospital's individual costs. Actual capital costs were included, subject to approved Certificate of Need. Total approved base year costs were then divided by budgeted inpatient days to obtain a global rate. Hospitals could accept or appeal their global rate. Those that appealed their rates were subject to a detailed budget review process.

Detailed Budget Review Method. The detailed review process involved inter-hospital cost comparisons to assess the reasonableness of departmental costs. Base year costs were separated into nonphysician and physician components, both of which were adjusted for intrastate wage differentials.

Payments under SHARE's detailed budget review method were limited to the lower of actual costs or reimbursable cost ceilings derived from cost centers, peer groups, units of service, and "challenge limits" or screens. Unit cost ceilings, averaging 110 percent of median cost, were calculated for all

hospitals statewide and for two hospital groupings defined by service category and geographic location. Seven peer groups by hospital service category were formed to classify major and minor teaching hospitals; large, medium, and small general acute care hospitals; rehabilitation facilities and other specialized facilities. Geographic peer groups were established to classify inner city, urban, suburban, and rural hospitals.

Screening. Each hospital's costs were subject to statewide and peer group screening. The screening process was sequential, involving four types of cost centers. These included:

Level 1: Cost centers comparable across hospitals (i.e., dietary, fiscal, and acute and intensive care nursing).

Level 2: Physician services and fringe benefits.

Level 3: Interest and depreciation, requiring special cost analysis due to nonuniform reporting.

Level 4: Other nonuniform costs, such as long-term care units and off-site services.

Level 1 cost centers were grouped into three clusters including general services, ancillary services, and patient care. Unit cost screens were established at 110 percent of median cost. If a hospital's unit cost exceeded a cluster screen, each cost center within the cluster was screened individually. The sum of costs in excess of peer screens was then compared to the cluster-based excess. The clustering method recognized interdepartmental cost shifting and potential weaknesses in the cost-finding model applied across hospitals.

Level 2 cost centers included general services, patient care coordination, and emergency room. Because these cost centers were assumed to differ significantly across hospitals, these limits were more liberally established and usually differed from 110 percent median unit cost, allowing increases to 130 percent of the median. Level 3 and Level 4 cost centers were

examined separately due to nonuniform reporting. Physician and nonphysician services were reviewed separately using similar methods. Teaching and research costs were reviewed on a case-by-case basis.

Volume. Once base year costs had been approved, historical and projected volumes were screened and hospitals' rates were increased or decreased accordingly. Admissions and patient days, as well as specific procedures for other ancillary services, were used to determine the effects of volume on hospital costs. For volume changes of less than 10 percent, labor cost was assumed to be 50 percent variable; supplies were 100 percent variable. All costs were determined to be 100 percent variable for volume changes of 10 percent or greater.

Trending. Approved adjusted base year costs were projected forward for inflation. In October 1976, New Jersey's inflation factor was changed from a weighted average composed of Average Hourly Earnings of Manufacturing Employees in New Jersey and the National CPI to a detailed index including more than 30 cost categories in the hospital market basket. Using proxies to estimate inflation for the rate year, these categories were weighted to obtain inflationary cost increases and were applied to all hospitals in the state.

In addition to projected inflationary increases, intensity increases were included for hospitals meeting certain departmental cost per admission criteria. A one percent increase was allowed if costs fell between the median and the challenge limit. Hospitals with costs between 90 percent of the median and the median received a two percent intensity allowance. A three percent intensity increase was granted to hospitals if costs fell below 90 percent of the median. No intensity increase was awarded if the departmental cost per admission exceeded specified challenge limits.

Minimum Base Period Challenge. Hospitals' base year rates were also subject to a "minimum base period challenge," a screening process to discourage hospitals from exceeding their allowable budgeted projections. If a hospital's actual costs exceeded those budgeted, the difference was subtracted from the following year's base rate, thus eliminating the incentive to increase spending in order to raise base rates in subsequent years.

Payment Rate. Base year approved costs adjusted for volume, inflation intensity, and other items were then compared with budgeted departmental costs. The lower of approved or budgeted costs was divided by budgeted patient days to calculate a hospital's initial approved Blue Cross and Medicaid payment rates. "Unreasonable" budgeted costs were usually appealed. To appeal, a hospital had to submit written documentation justifying its claims in accordance with established procedures.

2.3 SHARE Implementation

Implementation of the SHARE system was confusing for hospitals and for the state. The rate-setting process was detailed and involved, and the appeals process was overwhelming. During the first year of SHARE, six hospitals brought suit against the state. Initially, delays in the appeals process were requested by the hospitals and the state as both groups adapted to the new system. However, as the delays continued, they created cash flow difficulties and considerable uncertainty for New Jersey hospitals. As of the deadline for hospitals' submission of their 1979 budgets, 44 hospitals were still waiting for hearings on their 1978 rates, 7 hospitals awaited settlement of their 1977 rates, and some hospitals had yet to receive settlement of their rates for 1976 and 1975.[3]

[3] DRG Evaluation, Volume IV-A, Political Evolution, HRET, 1984, p. 29.

Hospitals were increasingly frustrated and irritated with the SHARE system. In addition to the program's complexity and lengthy appeals process, SHARE rates applied only to Medicaid and Blue Cross, which gave rise to severe cost shifting. By 1979, payer differentials reached as high as 30 percent between Medicaid and Blue Cross, compared with commercial payers. The financial viability of hospitals with large volumes of uncompensated care was increasingly threatened as these institutions, primarily located in inner-city areas, had few commercial payers to whom these costs could be shifted.

2.3.1 Senate Bill 1454. Amid the conflicts and litigation, new legislation was proposed in May 1976, ostensibly to amend the HCFPA so as to comply with changes mandated by the National Health Planning and Resources Development Act of 1974. However, Senate Bill 1454, introduced by liberal Democratic Senators Merlino and Parker, also proposed to extend the state's rate-setting authority to include all payers. Both Blue Cross and NJHA opposed the bill. Blue Cross opposed it because of the threatened loss of its favorable differential over commercial insurers. NJHA opposed any further extension of state control over hospitals and called for broader definition of allowable costs (including compensation for indigent care). After several public hearings on the bill, S-1454 died in committee in the fall of 1976.

Although S-1454 failed to become law, its text provided the basis for a grant proposal submitted concurrently by DOH to the Health Care Financing Administration (HCFA). Awarded in November 1976, the grant authorized the State of New Jersey to proceed with development of a casemix-based reimbursement demonstration applicable to all payers. The program was to begin implementation in 1979.

Haskins and Sells, the contractor that had designed the SHARE system, and Puter Associates of Yale University were enlisted to assist the state in developing the experimental reimbursement program. Moving from per diem methods, the project involved linking Diagnosis Related Groups (DRGs), developed by the Yale researchers, with medical abstract, billing, and cost data to determine a price-per-case payment system. In addition, designing the new reimbursement program involved hospital-specific adjustments for a variety of factors, including location, teaching status, and area wage rates, similar to those used in the SHARE system. Hospital-specific per case rates were used rather than statewide rates to ease hospitals' transition from per diem reimbursement.

Almost immediately, NJHA brought legal action against DOH, opposing state requirements that hospitals submit billing data for development of the program. In a key victory for the state, the hospital industry position was overruled by the courts. This decision was crucial to the development of the new reimbursement system, which relied on adequate hospital data to calculate rates for DRG payment.

DOH hired an unusual staff to develop the experimental DRG approach. Young, committed, and bright, staff members were not viewed as typical bureaucrats, and they brought to the project a more cooperative working relationship with hospitals. Finley and her associates were clearly "in their element," noted those involved with the legislature, and were known for "playing the system well" and "working legislative contacts."

2.4 Senate Bill 446 and the Implementation of DRGs

In June 1978, Senate Bill 446 was introduced and passed by the New Jersey legislature. S-446 contained many of the same provisions as S-1454,

but it also contained compromise elements. It did not impose restrictions on philanthropic contributions, and it included uncompensated care as an allowable cost. Further, it provided for a working capital infusion where necessary. Subsequent negotiation added several other important features, including the creation of a five-member Hospital Rate Setting Commission within DOH. While the bill called for development of a casemix approach for reimbursement, DRGs were not referenced at all, and casemix methods were noted only in passing.

2.4.1 Political Maneuvering

Although the NJHA favored key elements of the proposed legislation, its position on the total package was divided. Urban hospitals, which had supplanted suburban hospitals in positions of leadership in the association, strongly supported the provision for uncompensated care and viewed it as crucial to their survival. The suburban hospitals disagreed, and NJHA unexpectedly submitted competing legislation that proposed formation of an independent commission. Lacking support, however, NJHA dropped its proposal and focused its efforts on modifying the state's legislation.

Commercial payers supported the state's legislation, welcoming control over cost shifting. Prudential Insurance, in particular, anticipated greater competitive advantage with Blue Cross under the new regulation. Blue Cross continued to express concern about retaining its preferential status, which would be vitiated under the all-payer system. As a conciliatory move, a companion bill, S-419, was drafted within the Department of Insurance. S-419 assured Blue Cross a reserve of two and one-half percent and allowed experience rating for groups as small as 50 persons, which would enable Blue Cross to compete with commercial insurers. These concessions were in addition to

the rate-setting bill, S-446, which allowed Blue Cross and other payers to apply to the proposed Hospital Rate Setting Commission for differentials when "quantifiable economic benefits to the institution or to the health care delivery system as a whole" could be demonstrated.

S-446 passed in the New Jersey legislature, with the promise of additional federal funds through a federal reimbursement waiver for Medicare and Medicaid being touted as an important incentive to legislators. During 1979, DOH focused on promulgating regulations to implement S-446, and thus DRG payment, by the end of the year. Hospitals did not overtly oppose the new system, though they had become more experienced and more adept at SHARE's reimbursement methods. Adjustments to the 1979 SHARE system included global rates as an alternative to the budget review system, an option selected by nearly half of New Jersey's 103 hospitals.

The experimental prospective payment program presented a new set of incentives to hospital administrators and involved a complex and challenging array of developmental tasks. Data and record keeping took on particular importance under DRG reimbursement. It was crucial that medical records and billing and cost information be accurate, since they were to provide the basis for each hospital's payment rates. Transitional difficulties were inevitable. During the program's developmental phase, incorrect and incomplete coding of data were encountered, as well as inaccurate and discretionary recording of primary and secondary diagnoses. Establishing real costs for allocation to each DRG was also problematic because of severe interdepartmental cross-subsidization under SHARE. These problems were further exacerbated by large payer differentials.

The new demands of the DRG payment system resulted in considerable jockeying back and forth among NJHA, the state, and the federal government.

Hospitals were skeptical of the experimental program, which had no established track record. Considerable speculation centered on whether S-446 would be implemented with or without DRGs. NJHA remained split and was unable to block the program. Urban hospitals were eager to take advantage of provisions for uncompensated care. Suburban hospitals, however, continued to reproach the state for imposing implementation of an unproven system.

In March 1979, as a trial run, a "DRG Experiment" was initiated, establishing rates for 22 hospitals. Although rates were set, neither hospitals nor payers trusted the resulting rates and the trial run was never implemented.

By the summer of 1979, the Health Care Financing Administration (HCFA) was ready to force the issue. Threatening to withhold the federal waiver for Medicaid and Medicare, HCFA announced that DRG payment was a priority and that considerable federal money had been invested in the development of the New Jersey program. The demonstration was to be implemented with DRGs in 1980 or the waiver would not be granted until 1981, if at all.

The federal directive brought serious attention to the state's intentions for S-446. Political and legal obstacles continued nevertheless. Concern about the viability of the project increased further that fall, when Blue Cross raised new objections. Blue Cross argued that, because the program allowed hospitals to phase into the system voluntarily and to choose payment under either SHARE or DRGs, hospitals were at a distinct advantage financially, to the detriment of Blue Cross. Blue Cross also feared being required, unfairly, to subsidize Medicare, since the higher cost of treatment for Medicare patients within each DRG might skew the average cost per case.

Eager for smooth implementation of the DRG program, DOH agreed to a payer reconciliation of final rates. Interest in payer differentials, a

severe problem under SHARE, resurfaced in this context as payer groups fought to maintain market share.[4] Payer differentials were established, however, and ranged from 4.05 percent for Blue Cross to 2.43 percent for Medicare, 2.65 percent for Medicaid, and 1.76 percent for HMOs.[5]

The HCAB approved the regulations to implement S-446 in October 1979. Shortly thereafter, Medicaid, which remained a silent partner throughout the development phase, submitted a waiver request, and on December 22, 1979, HCFA granted the State of New Jersey a waiver to begin hospital payment by DRG. However, the conditions of the waiver were far more stringent than state officials had anticipated: federal payment under DRGs was limited to no more than what would have been paid for Medicare and Medicaid under the SHARE system.

2.4.2 DRG Implementation

Rates for the first hospital cohort were released on January 11, 1980. Almost immediately, NJHA initiated suits against the state and the federal government, but the courts ruled against NJHA in both cases. That spring, NJHA again threatened legal action, this time in response to announcements that New Jersey Medicaid would reduce payment for outpatient services by 40 percent because of fiscal difficulties. The suit never actually reached the court system, because in April Governor Byrne and the legislature promised, at the insistence of the federal government, to restore the Medicaid cuts to the 26 participating hospitals. Medicaid cuts were restored to all hospitals in June 1980.

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[4]The payer reconciliation has yet to be recognized as part of the final rate-setting. See Chapter 7.

[5]The Blue Cross differential was subsequently increased to 6.18 percent.

Actual DRG billing began in May 1980, generating new public concerns about the new system. Patient bills containing both service charges and DRG rates gave rise to confusion and an onslaught of complaints about the logic of DRG payment based on average per case costs rather than individualized billing. The press dealt harshly with the system, often muckraking. One incident, involving a $6,000 DRG rate for a broken finger, gained widespread publicity and pointed out a serious weakness in the system and the need for refinement of DRG categories. Under the initial 383 DRG set, based on ICDA-8 coding, the finger was classified with more serious, and more costly, diagnoses, including hip restorations and amputations. The patient was billed the full DRG rate for treatment consisting of a minor operation and a two-day hospitalization. On appeal, the rate was overruled in favor of charge-based payment, but critics continued to invoke the event in denouncing the DRG reimbursement method. (In 1982 the DRG classification system was improved by expansion to 467 categories, which allowed greater sensitivity to diagnostic classification and related costs of care.)

NJHA also lodged a series of complaints against the system, bringing these to the attention of the HCAB. Provision for a Capital Facilities Allowance, adequate bed supply, billing concerns, and other refinements were debated. The HCAB, supportive of New Jersey's DRG system and generally unsympathetic to industry concerns, remained true to the intent of the state program but did undertake some revisions to the regulations effective for 1981.

With the election of Republican President Ronald Reagan in 1980, the political climate of government regulation began to shift at both the state and the national level. New Jersey Senate Bill 1578, introduced by Senator Galiano in February 1981, called for a delay in phasing in the next cohort of

hospitals into the DRG system but lacked sufficient support, even within the hospital industry, to become law. Most hospitals, it appeared, were faring well under DRG payment. DRGs were perceived to be more generous than SHARE, especially by hospitals with large volumes of uncompensated care patients, the majority of which volunteered for immediate phase-in. In addition, most hospitals favored the state regulatory program because waivered states had been promised some protection from future federal cutbacks.

Phase-in of hospitals in 1981 and 1982 occurred smoothly, although minor changes both to the state program and within hospitals continued. As the industry gained experience with the system, individual hospitals became more confident of their ability to operate successfully under DRG reimbursement.

Staff positions funded by the federal government also started to be phased out in 1981. Project staff, including Joanne Finley, her chief deputy Bruce Vladeck, and their associates, left their positions as DOH assumed DRG system functions. Federally funded positions continued to be phased out throughout 1981 and 1982.

CHAPTER 3

DRG PAYMENT METHODS

New Jersey's DRG program evolved within the context of a long history of hospital regulation, as discussed in the previous chapter. Under contract with DHEW, the New Jersey Department of Health (DOH) developed the DRG demonstration in response to continuing concern about hospital cost increases, cost shifting among payers, related problems of uncompensated care, and patient casemix differences, and to address concerns that existing per diem methods provided inadequate incentives for hospital efficiency and control over unnecessary length of patient stay. The new system, involving all payers, linked diagnostic classifications with hospital payment in an effort to establish rates sensitive to inter-hospital differences in casemix and services required for patient treatment.

3.1 Background

The New Jersey experiment won legislative approval in 1978 with the passage of Senate Bill 446 (S-446). S-446 established the basis for implementing a prospective casemix-based reimbursement program under the authority of a Hospital Rate Setting Commission within the Department of Health. The bill also provided restrictions on cost shifting among payers. Payment rates were to be "equitable for each payer or class of payers," with an allowable payer differential in cases where economic benefit to the system as a whole could be demonstrated. Finally, S-446 resolved to include uncompensated care as a reimbursable cost, thus ensuring payment for indigent care and helping to alleviate the financial distress of many of the state's large inner-city hospitals. Implementation was scheduled to begin in 1980 and

to extend over a three-year period. Twenty-six hospitals, including many of the state's urban institutions, were expected to start up during the first year. Forty-two hospitals were to follow in 1981, with the remaining scheduled for "phase-in" by the end of 1982.

The newly legislated prospective payment program set for itself a broad and challenging agenda. Using a combination of hospital-specific and statewide costs, a methodology had to be developed using DRGs (Diagnosis Related Groupings) as a standard, or measure, of hospital output. This involved determining a preliminary cost base for each hospital, calculating a relative weighting scheme for each DRG by hospital, defining outliers and peer groupings, and a wide range of related developmental tasks. Extensive data processing efforts were required to set hospital rates by linking patient medical records, billing information, and hospital cost data. Operational considerations such as installing or upgrading management information systems, designing appropriate forms and audit procedures, and selecting intermediaries were also crucial to program start-up and had to be addressed before the first hospitals could be introduced to the program.

Although New Jersey pioneered DRG reimbursement, DRG methods have since been implemented in several state Medicaid programs[1] and have been adopted as the official payment method for Medicare's Prospective Payment System (PPS). These programs use a wide range of methods to link diagnostic groupings with hospital payments, combining various incentives in accordance with the specific policy objectives and intent of each program. New Jersey's system, however, remains unique in structure and design.

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[1]Other states that have recently adopted DRG payment methods for Medicaid include Utah, Pennsylvania, Michigan, and Washington.

The critical differentiating feature of the New Jersey system is that it is applied to all payers rather than to the Medicare or Medicaid populations exclusively. This factor accounts for many of the program's more specific variations from other programs, such as its inclusion of uncompensated care as a reimbursable cost, its blending of hospital-specific and statewide costs, and its methodologies for calculating rates and defining outliers. This chapter includes a general description of the DRG methodology and a detailed presentation of the structure and mechanisms of the New Jersey system.

3.2 DRG Case Classification

Patient classification by diagnosis group provides both a unit of output for DRG rate-setting and a basis for hospital payment. Early DRG systems, developed at Yale University in the mid-1970s, were based on 383 diagnostic groupings using ICDA-8 coding rubrics to classify cases according to primary diagnoses, average expected consumption of resources, and length of hospital stay. Intended to provide length of stay norms for medical record review, the first DRG sets were based on statistical rather than clinical groupings and did not distinguish secondary diagnoses. These classifications were refined in 1982 using ICD-9-CM codes and included iso-resource categories, which are more clinically meaningful and more effective in identifying intensity of treatment. Many early criticisms of the New Jersey DRG system were resolved or ameliorated with the introduction of the larger DRG classification set.

The new DRGs are derived from 23 major diagnostic categories (MDCs) based on organ systems and clinical specialties. Cases within each MDC are subdivided to distinguish diagnoses that require surgical procedures from

those that do not. These are further categorized to identify diagnostic subgroupings according to patient age, the presence of other conditions or diagnoses, and discharge status used to define individual DRGs. An example of the MDC subgrouping process is shown in Exhibit 3.1.

3.2.1 Establishing DRG Payment Rates

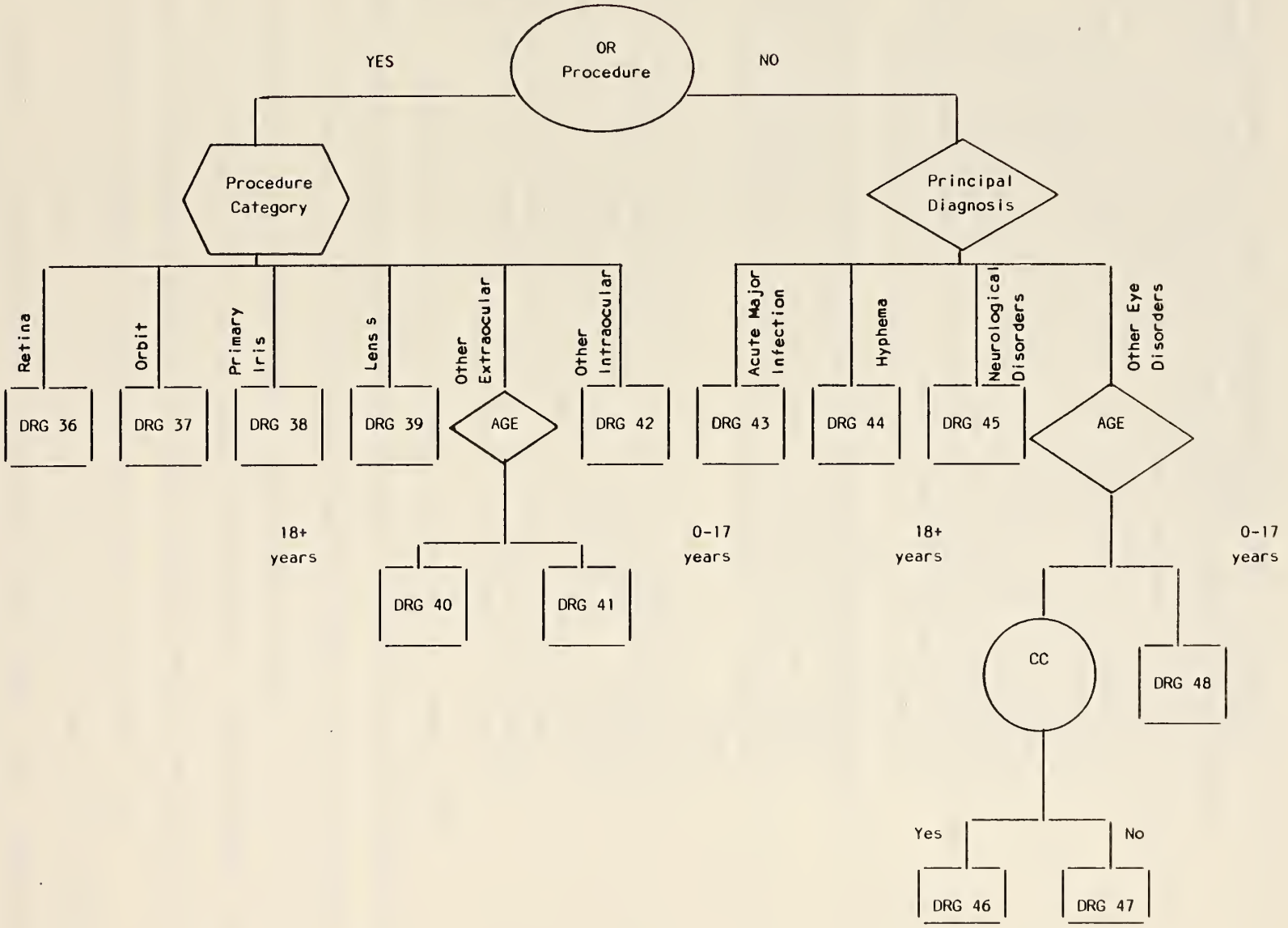
Several steps undertaken to establish DRG payment rates are common to all DRG systems. First, reimbursable financial elements must be identified and patients grouped by DRG to allow allocation of resources and services to each case. Typically, Medicare definitions of allowable costs are used to determine base year costs, although specific programs may include exceptions or adjustments for items such as depreciation and interest, medical education, and other capital needs or allowances. After costs have been defined, these items are standardized for institutional characteristics, such as geographic location and teaching status, and are projected forward for inflation and/or intensity increases over the base year. Trending factors also vary across programs but are usually based on a market basket constructed of proxy measures to estimate inflationary increases for wages and salaries and dietary, utilities, and other hospital costs.

DRG rates are then calculated in four steps:

1. Allocate Costs to DRGs. The resource requirements for patients in each DRG are determined after costs are allocated to revenue centers by methods similar to those used in the Medicare stepdown. A cost-to-charge ratio is calculated for each revenue center and is applied to the charges of each patient in a particular DRG to obtain the total cost associated with caring for patients in that DRG. The result is then divided by the number of patients in the DRG to arrive at the service cost per case.

Exhibit 3.1

Example of Major Diagnostic Category (MDC) Subgrouping



Source: Vladeck, Bruce C., "Medicare Hospital Payment by Diagnosis-Related Groups", Annals of Internal Medicine (1984) 100:576-591, p. 579, Figure 1: Major diagnostic category 02, diseases and disorders of the eye. OR = operating room; DRG = diagnoses-related group; CC = Comorbidity or complication.

2. Use Costs to Establish DRG Weights. Relative weights are then established to identify the cost of services required by patients within each DRG category by dividing the average cost of admissions within each DRG by the average cost of all admissions. The average admission is assigned a value of 1.0 and is used as a standard against which average per case resource consumption is measured. DRG relative weights then reflect the relative service intensity or cost for the average case. These weights serve as standards for hospital performance and allow comparison with average per case costs in other DRGs. For example, cases within a DRG with a relative weight of .98 are expected to require two percent less than average costs; cases from a DRG category weighted at 6.48 are expected to use roughly six and one-half times the amount of resources consumed by the average DRG case, at an average cost 6.48 times greater.

3. Use Weights to Establish DRG Payment Rates. Per case payment rates are calculated as the product of each DRG's relative weight and a hospital's average cost per case, standardized and adjusted for regional and institutional characteristics such as teaching status, geographic location, and composition of medical staff.

4. Defining Outliers. Outliers are defined for cases with special resource needs and serve as "risk bands" against unusual expense. Thresholds, or trimpoints, are used to identify outliers, establishing statistical boundaries at the upper or lower extremes of cost or length of stay for each DRG. Cases in a DRG that fall within the specified trimpoints receive payment based on the average cost per case. Outliers are reimbursed at higher or lower rates, usually on the basis of costs or charges.

DRG payment systems used by most states and by the Medicare program are based on actual historical utilization and costs, trended forward from an established base year, with adjustments for institutional or peer group characteristics. All systems implemented to date have been applied prospectively. The combination of prospective payment and per case reimbursement incentives encourages reduced length of stay and unit efficiency within the case.

New Jersey's DRG system places greater importance on individual hospital costs than do systems implemented by other states and by the federal government. New Jersey's DRG program incorporates hospitals' realized costs in the payment base in proportion to the degree of similarity in case type costs, adjusts for teaching status, and provides other hospital-specific ad-

justments for establishing DRG rates. New Jersey's program also includes uncompensated care as a reimbursable cost, distributed across all payers.

Medicare's PPS, and state variations of this system, depend to a greater extent on use of external standards, such as industry-wide peer groupings, independent of hospital-specific costs, to define rates of reimbursement. By 1986, nationwide rates will be used, adjusted only for urban/rural location, teaching status, and area wage rates. Both systems use DRG groupings, but they include different elements as reimbursable costs and employ different DRG methodologies for calculating rates and for estimating historic and projected costs.

In New Jersey's system, each DRG rate is based on a combination standard including hospital-specific and statewide costs. Overall, this averages 45 percent statewide cost per DRG. Individual rates are further refined by including an efficiency or incentive standard for each hospital by DRG, according to institution-specific performance capabilities for specific procedures.

Medicare's PPS rates include a transition period within which regional rates are blended with national rates for each DRG. The proportion of the standard, national rate increased from 25 percent during the program's first year and increases by quarterly increments until the implementation of 100 percent standard, national rates for all hospitals in 1987. Exhibit 3.2 provides a comparison of New Jersey's DRG system and the Medicare Prospective Payment System for DRG-based reimbursement.

Exhibit 3.2

Comparison of New Jersey DRG System to National DRG System

Characteristic	New Jersey	Proposed national Medicare system as of 10/1/83
Payment mechanism	DRGS	DRGS
Time frame	Prospective	Prospective
Calculation of rates	Hospital costs averaged to form statewide standard. This standard is melded with the hospital's own historical cost.	National and regional standards established. Over a period of four years, the hospital-specific and regional costs are proposed to be phased out, leaving one national rate for all hospitals.
Medical education costs	Hospitals peer grouped by teaching status.	Indirect teaching allowance. No peer grouping.
Financial elements	Standard rate is composed of direct patient care costs. Uncompensated care, working cash infusion, and capital costs included in indirect mark-up factor.	Standard rate is composed of direct and indirect costs, including capital. No uncompensated care or working cash infusion is included.
Payer status	All-payer system.	DRGs billed to Medicare patients only. Hospital still sets charges for other patients.
Appeals mechanism	Hospital Rate Setting Commission hears all appeals and approves rates.	No appeals mechanism planned.

Source: New Jersey Hospital Rate Setting Commission, 1982 Annual Report.

3.3 Overview of the New Jersey DRG System

New Jersey DRG rates are determined prospectively for each hospital prior to the rate year. A five-member Hospital Rate Setting Commission approves revenue for direct patient care and capital-related costs, establishing allowable financial requirements for each facility. Actual base year costs are trended forward for inflation and other approved changes and are used to calculate payment rates, which vary by DRG and by hospital, for the upcoming year.

The New Jersey DRG system follows the general steps outlined for the development of all DRG systems, but the particular details are unique to New Jersey, largely because only in New Jersey is the DRG system used to set rates for all payers. The inclusion of uncompensated care in the development of the rates and the permanent incorporation of blending--of DRG standard rates with hospital-specific rates--are two obvious examples. Less obvious, but equally important, is the fact that the DRG rates are inextricably linked to a specific overall limit on hospital payment. This feature, which greatly colors the development of DRG rates, also sharply distinguishes this system from other DRG systems, which attempt to control only unit costs, not total revenue under the system. In some respects, the actual mechanics of the New Jersey system are more closely related to a system using hospital-specific revenue caps with a DRG-casemix adjustment, similar, for instance, to the Maryland Guaranteed Inpatient Revenue System.

With this critical feature in mind, we turn to a brief overview of the New Jersey DRG system, followed by a detailed description of the various steps involved in calculating rates. These steps are summarized below:

- Costs are divided into direct and indirect costs prior to calculation of specific DRG rates. The rate-setting process proceeds by reaggregating these costs and assigning them to each DRG.

- Indirect costs are combined with several other elements (physician costs and the capital allowance factor) and converted to a percentage, which is applied to the established direct inpatient care costs for each DRG.

- After the rate year, a hospital-level reconciliation is carried out that combines the original indirect allowable costs with adjusted direct costs to produce a new total revenue limit.

- Compliance is measured against this adjusted total revenue limit rather than the original DRG rates or the original total revenue limit.

Exhibit 3.3 summarizes the various financial elements that are included in the calculation of DRG rates (and, correspondingly, each hospital's total estimated revenue).

During the first two years of New Jersey's DRG program, rates were established for a set of 383 diagnostic categories. In 1982, however, payment rates were based on a more sophisticated DRG set, which included 467 diagnosis groups. Merged patient abstract and billing data based on 1978 reporting were used to establish base year rates for hospitals phased in during 1980. Payment rates for 1981 to 1983 were calculated using 1979 base year costs for all New Jersey hospitals. These were derived from the Uniform Bill-Patient Summary (UBPS), required of all New Jersey hospitals as of January 1, 1981, which combines abstract and billing information on the same form. The system was rebased in 1984, using 1982 base year costs from each hospital's cost reports.

3.3.1 Development of Reasonable Total Costs

The first step in the development of a hospital's rate is the development of an amount determined to represent reasonable total costs. Several steps are necessary to develop this reasonable cost; these are described in the following sections.

Exhibit 3.3

New Jersey DRG Reimbursement System:
Financial Elements of Cost

	NJ DRG System
I. Direct Patient Costs	
Inpatients (nursing, ancillary, hospital-based physician)	Includes incentives and disincentives as a result of blending with DRG standards. The calculation considers equalized differences in labor costs.
II. All Other Hospital Costs	
Indirect patient care	Various cost centers are screened at 110 percent of the median cost per unit of service. The calculation considers equalized differences in labor costs.
Depreciation & interest on building & fixed equipment	Capital facility allowance. May be more or less than lease, depreciation, and interest.
Depreciation of major movable equipment	Price-level depreciation on major movable equipment.
Interest expense on major movable equipment debt	Not reimbursed.
Short-term interest expense	Not reimbursed Working capital allowance Working cash infusion Uncompensated care Personnel health allowance
Return on equity capital	Paid to proprietary hospitals in lieu of a capital facility allowance and price level depreciation.
Net recovery of expenses and other income	Net recovery of expenses and other income
ACTUAL TOTAL COST	TOTAL REASONABLE COST

Source: Adapted from DRG Evaluation, Volume II, Economic and Financial Analysis, Health Research and Educational Trust of New Jersey, 1984.

3.3.2 Preliminary Cost Base

New Jersey's rate-setting process begins with the establishment of a preliminary cost base (PCB) for each hospital. Comprised of both fixed and variable components, the PCB is an estimate of each facility's allowable costs, which are necessary for calculating DRG payment rates. The PCB includes the following components:

- direct patient care costs,
- indirect patient care costs,
- hospital-based physician costs,
- net income from other sources, and
- capital component.

With some important exceptions, these are derived from each hospital's cost report. However, the first three of these are trended forward for inflation using a New Jersey economic factor that includes over 30 items, tailored to each hospital's specific cost weights. No intensity allowance is included for changes in management or improvements in technology.

The preliminary cost base is reviewed and approved by the Hospital Rate Setting Commission prior to allocation of costs to each DRG. After costs have been approved, a Certified Revenue Base (CRB) (i.e., the preliminary cost base as approved by the HRSC) is established for each facility, reflecting each hospital's total revenue requirements for the rate year. Net income from other sources, including grants for the medically indigent, are deducted and applied as revenue against the CRB. All items included in the proposed rate are appealable before the Commission.

Several steps are necessary to establish each hospital's preliminary cost base in such a manner that it can be subsequently converted to DRGs. First, direct, indirect, and patient care general service costs are identified

Exhibit 3.4

Cost Reporting and Allocation Procedures

S-446 DRG Cost Centers		Basis for Allocating Cost Type of Component of Costs	Center Costs to DRG
I. Direct Patient Care Cost Centers			
1. Medical/Surgical (MSA)		Nursing salaries, nonsalaries[b]	Patient days
2. Obstetrics (OBS)	ACU[a]	(supplies, contract services,	Patient days
3. Pediatrics (PEDS)		lease costs, depreciation, price	Patient days
4. Psychiatric Acute Care Unit (PSA)		level allowance and other expenses)	Patient days
5. Intensive Care Unit (ICU)	ICU[a]		Patient days
6. Coronary Care Unit (CCU)			Patient days
7. Neo-Natal Intensive Care (NNI)			Patient days
8. Newborn Nursing (NBN)	NEN[a]		Patient days
9. Emergency Room (EMR)		Nursing salaries, nonsalaries	Charges
10. Clinic (CLN)		Nursing salaries, nonsalaries	Charges
11. Home Health Agency (HHA)		Nursing salaries, nonsalaries	Charges
12. Anesthesiology (ANS)		Nursing salaries, nonsalaries	Charges
13. Blood Bank (BBK)		Technician salaries, nonsalaries, physician fees	Charges
14. Cardiac Catheterization		Technician salaries, nonsalaries, physician fees	Charges
15. Delivery (DEL)		Technician salaries, nonsalaries, physician fees	Charges
16. Dialysis (DIA)		Nursing salaries, nonsalaries	Charges
17. Drugs Sold to Patients (DRU)		Technician salaries, nonsalaries,	Charges (FHM)
18. Electrodiagnosis		Nursing salaries, nonsalaries, physician fees	Charges
19. Laboratory (LAB)		Technician salaries, nonsalaries, physician fees	Charges (BBK&LAB)
20. Nuclear/Surgical Supplies (NSS)		Technician salaries, nonsalaries, physician fees	Charges
21. Medical/Surgical Supplies (NSS)		Technician salaries, nonsalaries,	Charges (CSS)
22. Operating Room & Recovery (DRR)		Nursing salaries, nonsalaries	Charges
23. Physical Therapy (PHT)		Technician salaries, nonsalaries, physician fees	Charges
24. Radiology (RAD)		Technician salaries, nonsalaries, physician fees	Charges
25. Respiratory Therapy (RSP)		Technician salaries, nonsalaries,	Charges
26. Therapeutic Radiology (THR)		Technician salaries, nonsalaries, physician fees	Charges
II. Indirect Patient Care Cost Centers			
1. Research (RSH)		Salaries, Nonsalaries	The costs associated with
2. Nursing and Allied Health Education (EDU)		Salaries, Nonsalaries	the indirect patient care
3. Graduate Medical Education (GME)		Salaries, Nonsalaries	cost centers are not
4. General Administrative Studies (IAM)		Salaries, Nonsalaries	allocated directly
5. Inpatient Administrative Services		Salaries, Nonsalaries	into the DRG
6. Outpatient Administrative Services (OAM)		Salaries, Nonsalaries	
7. Malpractice (MAL)		Nonsalaries	
8. Employee Health Insurance (EMI)		Nonsalaries	
9. Repairs and Maintenance (RPM)		Salaries, Nonsalaries	
10. Utilities (UTC)		Nonsalaries	
III. Patient Care General Services Cost Centers			
1. Central Supply Services (CCS)		Salaries, Nonsalaries	Costed requisitions
2. Dietary (DTY)		Salaries, Nonsalaries	Patient meals
3. Housekeeping (HKP)		Salaries, Nonsalaries	Hours of service
4. Laundry and Linen (LAL)		Salaries, Nonsalaries	Pounds of laundry
5. Medical Records (MRD)		Salaries, Nonsalaries	Percentage of time spent
6. Pharmacy (PH&)		Salaries, Nonsalaries	Cost of drugs

Source: Adapted from DRG evaluation, Economic and Financial Analysis, Volume II, Health Research and Education Trust of New Jersey, 1984.

[a]Nursing centers for first year of implementation were combined into Acute (ACU), Intensive Care (ICU) and Newborn Nursing (NBN).

[b]All components of nonsalaries may not always apply to all cost centers.

from each hospital's cost report, as identified in Exhibit 3.4. Direct costs include nursing, diagnostic, and ancillary service costs, which vary by casemix and by volume. Indirect costs include institutional costs such as fiscal, administrative, maintenance, and utilities. There are also some costs, including medical records, dietary, and housekeeping, for which the cost centers are not uniquely direct or indirect. These are distributed to direct and indirect cost centers using various allocation statistics to determine the cost of services supplied to each department.

3.3.3 Allocation of Direct Inpatient Care Costs to DRGs

Once hospital costs have been established, patients from the hospital's base year are classified by DRG. Direct patient care costs are then allocated on a per case basis to each DRG. These include the costs of nursing, ancillary services, and hospital-based physicians. The Uniform Bill-Patient Summary (UBPS) provides the necessary link for allocating costs to each patient. The UBPS form includes the following:

- date of birth,
- admission date,
- payer codes,
- DRG number and outlier indicator,
- all billing items,
- discharge date,
- principal and other diagnosis codes, and
- principal and other procedure codes.

To calculate the direct cost per case for each DRG, patient care costs are grouped into three revenue-producing components: nursing care, diagnostic and ancillary services, and hospital-based physician services. A variety of measures of resource use (MRUs), developed to align costs and charges, are used to allocate direct inpatient care costs to patients in each DRG, as described below.

Nursing. Nursing services are separated into three basic patient categories:

Group 1: medical/surgical,
pediatric,
acute psychiatric,
psychiatric/psychological, and
obstetric patients;

Group 2: intensive care,
neonatal intensive care, and
coronary care patients; and

Group 3: newborn nursery patients.

A nursing cost per patient day is calculated by dividing the total nursing cost for each group by the number of patient days. Nursing costs are allocated across DRGs by multiplying the average group cost per day by the average length of stay for patients in each DRG category.

Ancillary Services. Ancillary and diagnostic costs are apportioned among DRGs in a manner similar to that used to allocate nursing service costs, but costs are prorated on the basis of controlled charges rather than days. To obtain an average cost per case, a cost-to-charge ratio is calculated for each service category, multiplied by total service charges for patients in a specified DRG, and divided by the number of patients in that group.

Hospital-Based Physician Services. Certain hospital-based physician services costs are included in the ancillary and diagnostic cost per case. For the rate review process, however, the portion of the total cost per case that can be attributed to hospital based-physician services is estimated, by multiplying the departmental cost per case by the ratio of physician services cost to total cost. Reimbursement allowed for hospital-based physician services depends on the base year costs incurred by individual hospitals.

3.3.4 Blending Direct Inpatient Care Costs with DRG Standards

The direct patient care rate for each DRG is a combination of the hospital's own actual direct patient care cost and standard direct patient care costs. (These costs were also identified as nursing and ancillary/diagnostic services in the determination of each hospital's reasonable cost.) The standard cost for a DRG equals the average non-physician direct patient care costs for hospitals participating in the system statewide. Two separate standards are employed--one based on the DRG mean, the other based on the DRG median. The mean is used if a hospital accepts the rate without appeal; otherwise the median is used. Since mean-based rates are higher than rates based on median costs, there is an incentive to avoid appeal. The standards also include an "equalization" adjustment for intrastate differences in hourly labor costs.

Weights. Relative weights are used to determine the portion of hospital-specific and standard costs, which are blended to calculate the rate for each DRG. Separate weights apply for teaching and nonteaching hospitals, and are derived based on the degree of dispersion, or variation, in treatment costs per case. To measure this dispersion statistically, a coefficient of variation (the ratio of the standard deviation to the group mean) is calculated for each DRG. This ratio indicates how tightly per case treatment costs cluster around the mean, or average, for the group. For DRGs with considerable dispersion around the group average, greater emphasis is placed on the hospital's own cost in calculating the payment rate; if patient treatment costs within a DRG are fairly similar, greater weight is placed on the standard or average cost.

Payment "incentives" or "disincentives" are also calculated for each DRG. These ratios of hospital-specific costs in relation to the standard

costs show how much the hospital gained or lost from the combination of its costs with the standards and illustrate differences in cost due to institution-specific efficiencies of case treatment, relative to standard industry norms. These incentive and disincentive ratios do not alter hospital-specific rates for each DRG.

3.3.5 Defining Outliers

New Jersey's system originally used average length of stay as a standard by which to measure resource consumption within each DRG. Cases that deviated significantly from the group average, reporting unusually high or low lengths of stay, were classified as outliers and were exempt from the DRG rate schedule. Outliers were defined by statistically derived "trimpoints" at the upper and lower extremes of each DRG distribution. Upper and lower trimpoints were specific to each DRG. The payment rate for patients whose length of stay fell within these trimpoints was the average cost per case for the particular DRG. Cases that qualified as outliers were reimbursed on a charge basis until recently, when a per diem system for outliers was adopted.[2]

In 1982, the New Jersey Department of Health expanded its definitions of outliers. In addition to trimpoint outliers, "clinical" outliers were excluded from DRG payment. Clinical outliers include patients in DRGs with fewer than six cases during the base year; patients who initiated discharge against medical advice; patients with same day discharges; patients who die while hospitalized; and patients in any of 74 DRGs exempt from the program on the basis of poorly defined clinical characteristics. However, the refined set of outlier definitions was also constructed when new outlier

[2]See Chapter 4 for a discussion of the change in outlier methods.

payment methods were adopted. The change in outlier definition increased the proportion of outlier cases, relative to DRG inliers. Currently 30 to 40 percent of cases statewide are outliers paid on the basis of controlled charges.[3]

3.4 Indirect and Capital-Related Cost Mark-Up

After payment rates for direct patient care services have been determined, they are "marked up" proportionately to cover all other fixed, reimbursable costs. The mark-up factor includes costs for indirect patient care not included in the direct patient care rate, capital and related expenses, and major movable equipment and working capital. These costs, along with direct patient care costs, have been screened in establishing the Preliminary Cost Base and must be approved by the Hospital Rate Setting Commission to be recovered through each facility's final rates. The financial elements of the mark-up factor are described below.

Indirect Patient Care Costs. Indirect costs, as discussed earlier, include expenses such as general administration, fiscal, utilities, maintenance, education and teaching for teaching hospitals, malpractice premiums, and those patient care general service costs that were distributed to indirect centers during the allocation procedure. Indirect costs are subject to screens, for teaching and nonteaching hospitals, that define "reasonableness" as the lower of actual base year cost or 110 percent of the median. Indirect costs in excess of the screen are disallowed. In teaching hospitals, resident physician salaries and stipends are counted as indirect costs and are included

[3] A detailed discussion of New Jersey's outlier methodology and payment schedule is included in Chapter 4.

in the screening process. Other physician fees and salaries are not included as allowable base year costs or in the DRG rates.

Reasonable indirect patient care costs are considered fixed for the rate year. Hospitals are reimbursed the prospectively determined amount, regardless of costs actually incurred in the base year, and are not subject to change due to changes in volume or casemix.

Capital and Related Costs. The New Jersey system recognizes the debt service requirements and associated financing cost of a hospital's capital facilities (i.e., buildings and fixed equipment) by providing reimbursement for these costs through a Capital Facilities Allowance (CFA).[4] The CFA consists of financial requirements to retire long-term debt (interest and principal), to replace or renovate a facility, or to change the scope of available service. The CFA also includes an amount to meet cash requirements for replacement costs and is intended to keep hospital capital requirements constant with inflation so that hospitals will be able to replace assets as they are fully depreciated.

Major Movable Equipment. Depreciation for major movable equipment is included in the rate on a replacement cost basis, and hospitals are required to fund it in the same manner. This is to ensure that hospitals are reimbursed a sufficient amount to cover replacement of major movable equipment during inflationary times, without having to resort to debt financing.

Working Capital. A working capital allowance (working cash infusion) is provided to any hospital that, in its base year, had uncompensated care greater than or equal to the median percentage across all hospitals. In-

[4]The CFA is calculated for each hospital as the higher of: (1) depreciation plus interest, or (2) principal plus interest plus a contribution toward partial replacement cost.

stitutions with less uncompensated care may receive such an allowance only on recommendation by the Commissioner, subject to the approval of the HRSC.

Prompt Pay Discounts. Since payers differ in the time they take to pay their bills and since hospitals incur implicit interest expense while awaiting reimbursement, additional revenue may be required to offset these costs. A five percent allowance is included in gross approved revenue to allow for the cost of working capital (prompt pay discount). This percentage is reduced over a 90-day period; after 90 days, 100 percent of the bill must be paid.

3.5 Payer Factors

After direct and indirect revenues have been approved by the HRSC, a payer factor is applied to the proposed DRG rate to cover reimbursement for charity care provided to medically indigent patients and for hospital bad debt. The uncompensated care factor varies by hospital and by payer and is constructed so as to spread the statewide total of uncompensated care costs among payers. While this does not remove incentive for payers to avoid certain hospitals because they have a disproportionate share of uncompensated care, in practice other payers have very little power to broker patients to specific hospitals.

Finally, payer differentials are established by the HRSC for practices that benefit the health care system as a whole, such as lower bad debt ratios and subsidization of open enrollment. Such payer differentials are included in the payer factor used to calculate each facility's DRG rates. Differentials are generally small (six percent or lower) and are granted in cases where lowered costs to the health system as a whole can be demonstrated.

3.6 Approved Revenue and the DRG Rate

Each hospital's proposed DRG rate is calculated on the basis of components described in the previous section. The direct inpatient care rate, indirect cost mark-up, and payer factors are combined to derive the total amount billed to each patient or payer, as shown in Exhibit 3.5.

3.7 Appeals

Once a hospital's rates have been proposed by DOH, hospitals may accept, conditionally accept, or reject their rates to the HRSC. Those that accept their rates may appeal only the capital facilities allowance formula and receive a one percent bonus on certain direct patient costs in their rates -- an incentive to accept the rate and avoid the appeals process. This provision was included to reduce the administrative burdens of small and questionable appeals. The allowance is entered as an indirect cost in the mark-up factor. Hospitals that conditionally accept their rates do not receive this bonus but may appeal the following items: changes in scope of teaching, physician compensation arrangements, approved Certificate of Need projects, revenue adjustments, and revisions to payment rates for Same Day Surgical Units. A hospital may also elect to reject its rates and submit exceptions before the HRSC. A majority of hospitals have submitted appeals since 1980, with most issues concerning costs incurred after the base year and associated with technological innovations.

The HRSC also informs each hospital of its approved revenue for the upcoming year. This amount is determined by multiplying the anticipated patient load for each DRG by the approved rate; the totals for each DRG are then added to arrive at the DRG total. Expected revenue from outpatient services and outliers is added to this figure.

Exhibit 3.5

An Example of the Calculation of DRG Payment Rates

• Direct Inpatient Care Rate (nursing; diagnostic and ancillary; hospital-based physican cost. This rate is equal to the sum of hospital-based physician costs plus a portion of the individual and standard non-physician cost)		$ 960.70
• Mark-up (Capital/indirect costs such as overhead and administration)	X	1.434
		$1,377.64
• Payer Factor (Varies by hospital and by payer, including a portion of the hospital's costs for medically indigent, uninsured patients)	X	1.0336
• Total amount billed patient or third-party payer		$1,423.93

Source: Medical Laboratory Observer, July 1983.

3.8 Hospital Year-End Reconciliations

Since revenue budgeted for each hospital is based on projections and estimates, a reconcilation of the hospital's projected versus actual revenues occurs at the end of the year. This process adjusts direct revenues according to actual experience. Indirect costs are considered fixed and are not subject to adjustment. Over-charges or under-charges are reflected in the following year's rates. An interest penalty is levied on revenue in excess of the approved amount, and the hospital receives interest on the under-collected amount.

An end-of-year final reconciliation is required to adjust actual experience to the projected rates. Adjustments are made for incremental revenue associated with increases and decreases in volume and casemix, as well as for actual inflation projected for the rate year. Year-end reconciliations are reflected in subsequent payment rates through the mark-up factor.

CHAPTER 4

STATE ORGANIZATIONAL AND IMPLEMENTATION ISSUES

Creating and implementing New Jersey's DRG system involved several challenging organizational and technical tasks. As part of the political compromises involved in the passage of S-446, not all rate-setting authority was directly vested in the Department of Health (DOH). In fact, the power actually to set rates was vested in a newly created oversight board, the Hospital Rate Setting Commission (HRSC). The rate-setting process itself is centralized in DOH, with the HRSC overseeing the approval of rates and appeals. The HRSC meetings are the institutional forum where hospitals, payers, public advocates, and other interested parties can raise particular concerns about the DRG system. Section 4.1 discusses the organization of the unit responsible for the rate-setting process in DOH, while Section 4.2 describes the rate-setting process itself, including the activities of HRSC.

As the DRG system evolved, DOH encountered a variety of unanticipated problems in the DRG system. Over the four years of DRG implementation, DOH sought to refine the DRG system, addressing four major areas of concern.

- reimbursement of capital,
- certificate of need process,
- reimbursement of outliers, and
- reimbursement of uncompensated care.

Each of these issues is discussed in Section 4.3.

4.1 Organizational Impact

S-446 mandated that the Department of Health (DOH), develop and administer health care facility cost containment programs while promoting the financial solvency of hospitals and similar health care facilities. No mention of a casemix system was specifically included in the mandate. However, as mentioned previously, Dr. Joanne Finley, the Commissioner of Health during the design and implementation phases of the DRG system, was committed to demonstrating the feasibility and effectiveness of DRGs as a reimbursement methodology and classification system.

Conceptually, four major tasks were required to implement such a DRG system:

1. patients had to be classified into medically meaningful and manageable categories;
2. the real costs of care had to be calculated;
3. these costs had to be allocated to each DRG category; and
4. a methodology had to be established to update these costs to determine prospective prices.

The phase-in activities, developmental and implementation tasks, and application of the methodology have been well documented and do not require reiteration here.[1] Suffice it to say that the state had its role cut out for itself.

4.1.1 Department of Health

Responsibility for the casemix system initially rested with the Health Economics Services (HES) Program within the Health Planning and

[1]New Jersey Department of Health, A Prospective Reimbursement System Based on Patient Case-Mix For New Jersey Hospitals, 1976-1983, Final Report, October 1983.

Resources Development Division of DOH. Three other units were also under HES: Hospital Rate-Setting; Nursing Home Rate-Setting; and Systems Support. Adding the Prospective Case-Mix Project made HES one of the largest divisions in DOH. By 1983, the division split into three separate divisions, combining the Prospective Case-Mix Project and the Rate-Setting Unit together into the Hospital Reimbursement Unit. The original DRG team was composed of about 18 professional staff, most of whose positions were federally funded. The state assumed responsibility for all federal positions by September 1983. Currently, the Hospital Reimbursement Unit employs 22 professional staff, 12 of whom are rate analysts with primary responsibility for setting hospital rates and who deal exclusively with individual hospital rate-setting problems.

The Hospital Reimbursement Unit has also added a policy group composed of four health economic research specialists. This group concerns itself with long-range issues relating to hospital reimbursement rather than focusing on hospital-specific issues. Among the issues this group has considered and is currently evaluating are options for reimbursing capital, ways to accommodate the TEFRA regulations, changes in reimbursing graduate medical education, physician unbundling, and nonphysician rebundling. Most recently, the policy group was involved in preparing the waiver to extend the demonstration.

A common criticism expressed by state and hospital respondents is DOH's inability to retain its staff. Staff turnover has been extremely high. One study indicates that the average length of employment of rate analysts in the rate-setting division has been about 13 months. Further, the probability that a hospital will finish the rate year with the same analyst is

less than 30 percent.[2] Indeed, as one DOH staff put it, "Rate-setting is a great training ground for a better and high-paying job with a hospital--this unit attracts very upwardly mobile people." As rate analysts become intimately involved with an individual hospital, analysts are frequently recruited to work for hospitals or firms representing hospitals. The discontinuity created by this high turnover results in delays in issuance of hospital rates and final approval by the Hospital Rate Setting Commission; every time an analyst leaves, the hospital must start anew with another analyst.

In addition to the staff turnover, many hospital respondents noted differences between the current DOH staff and the original DRG team. The original DRG staff members were described as "dynamic, energetic, and committed young people." They were perceived as bright and capable--respondents could say nothing to taint their reputation. However, as the federal funding for staff positions was rescinded, and as more and more hospitals recruited these bright young people for their own organizations, observers felt that DOH was unable to hire the same caliber staff. One hospital respondent commented how "bureaucratic and civil-service oriented" DOH staff had become. DOH does indeed compete with hospitals for such capable staff. Hospitals can offer higher salaries and better benefits. Furthermore, DOH is constrained by civil service requirements. DOH has acknowledged these problems and has been attempting to upgrade analyst positions to higher salary levels.

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[2] L. Rosen, S. Fillebrown, N. Weisfeld, On the Frontier: New Perspectives on New Jersey's Hospital Payment System, Draft, Center for Health Facilities Research, February 1985.

4.1.2 Hospital Rate Setting Commission

Among other things, S-446 established the New Jersey Hospital Rate Setting Commission (HRSC) to adjudicate the Diagnosis Related Group (DRG) Reimbursement System. Three Commissioners are appointed for four years by the Governor, subject to Senate approval. Two of the three appointees must be consumers of health care services but not providers; the other appointee must have experience with hospital administration or finance. Each appointed member receives a $150 per diem plus reasonable expenses incurred in the performance of Commission duties. The Commissioners of Health and Insurance are ex officio Rate Setting Commission members. Most often, however, the Commissioners send their designated representatives to Commission meetings.

The Commission's mandate is to promote cost containment at the same time as ensuring hospital solvency. Access, availability of services, and quality of care are also prime concerns of the Commission. Weekly meetings are generally held to review issues related to hospital reimbursement and are attended by representatives from the Departments of Health and Human Services, hospitals, payers, the Public Advocate's office, and other interested groups. Unlike the hearings under the SHARE system, the Hospital Rate Setting Commission maintains an informal approach to its hearings and encourages active participation from attending representatives. While the Commission asserts that this approach fosters open and candid discussion, some participants criticized the system, preferring presentations of formal testimony by attorneys representing hospital administration concerns.

By statute, the DOH can charge health care facilities a reasonable annual fee to support the duties and functions of the rate-setting process, including the support of the Hospital Rate Setting Commission. These "commission fees," as they are known, have increased since 1980 to meet the

demands of the rate-setting process. Between 1980 and 1982, the annual charge was $.50 per adjusted admission for each adjusted admission in the year of each hospital's current cost base.[3] The rate increased to $1.00 during 1982; since 1984, the rate has further climbed to $1.70 per adjusted admission. Thus, revenues generated from the collection of rate-setting commission fees totaled $1.1 million in 1983.

4.1.3 Other Agencies

It is important to note that DHS staff do not work in isolation from other health planning and regulatory bodies. Due to the all-payer nature of the system, it is imperative that DOH work with the Department of Human Services (DHS), the Health Care Administration Board (HCAB), and the Statewide Health Coordinating Council (SHCC). All groups play an important role in hospital regulation and health planning, although the HRSC has final authority over rates.

As mentioned previously, DOH administers the DRG system for all payers--setting hospital rates, establishing peer grouping and other standards, proposing new regulations, and so forth. However, DHS administers the Medicaid program--processing Medicaid claims, implementing regulations specific to the Medicaid program, and operating other programs that provide benefits to the categorically eligible for public assistance. DHS and DOH are organizationally parallel, but DOH has a broader purview of health planning in the state. However, DOH actions have a direct impact on the Medicaid program,

[3]The HRSC adjusts each hospital's total admissions to account for outpatient and other program revenues. Thus, total admissions are multiplied by the ratio of gross revenues to inpatient revenues.

and hence, DOH must consider DHS concerns with respect to Medicaid program activity.[4]

HCAB and SHCC, on the other hand, are oversight councils, organizationally placed in an advisory capacity to the Commissioner of Health. Proposed regulations for the succeeding years are reviewed and considered for adoption by the Health Care Administration Board (HCAB). The HCAB has the final authority either to adopt or to reject the DOH-proposed regulations; it has no authority to modify or amend proposed regulations. The Board consists of 13 members, 11 of whom are appointed by the Governor, with the consent of the Senate. The appointed members represent physicians and health care facilities, labor, industry, and the public at large. Of the 11 members appointed by the Governor, at least 6 must be consumers of health care service who are not providers of such services. The remaining two HCAB members are the Commissioners of Health and Insurance, or their designated representatives, and serve as ex officio voting members.

Similarly, the SHCC reviews all DOH recommendations concerning CN applications and proposes criteria for review of CN requests. The council also approves the state health plan. The SHCC consists of 34 members. All members are appointed to the council by the governor for a term of three years and serve without compensation. Sixty percent of the members must come from the five HSAs. The remaining 40 percent represent the health care industry, including nursing homes, ambulatory care, hospitals, and insurance companies. Public advocates as well as leaders from minority communities also participate. The Commissioners of Health and Human Services are also members, with voting privileges.

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[4]Chapter 5 discusses how Medicaid operates under an all-payer DRG system.

4.2 The Rate-Setting Process

The rate-setting process has become relatively routine, as displayed in Exhibit 4.1. After the DOH issues a hospital its proposed rates, the hospital has 45 working days from the receipt of the proposed rates to notify the Hospital Rate Setting Commission (HRSC) and the DOH of its intention to accept, conditionally accept or reject their Certified Revenue Base. If the hospital accepts, it may only appeal the Capital Facility Allowance formula, but receives a bonus of one percent of direct patient care costs. Hospitals that conditionally accept their proposed rates forfeit the one percent bonus but may appeal a wider, yet limited, range of issues, including: changes in scope of teaching, physician compensation arrangements, approved CN, revenue adjustments, and revisions to payment rates for Same Day Surgery Units. Finally, hospitals rejecting their proposed rates may appeal any issue, but if the hospital loses its appeal, its rates are automatically recalculated using a lower level of approved cost than the original schedule of rates (i.e., the efficiency standard). Apparently this disincentive is effective, since only one hospital has ever rejected its rates.

Following receipt of the Appeal Document specifying the hospital's exceptions, the DOH must schedule a detailed review within 45 working days. The hospital is also permitted to submit additional information within ten days. The DOH must then submit its detailed review and accompanying recommendations to the hospital and the HRSC. Within ten working days, the hospital must respond to the DOH recommendations by submitting a Petition of Objections to the HRSC. The petition must state what issues the hospital wishes to have reviewed and what relevant facts were not fully addressed by the DOH in reaching its recommendations. Within 140 working days, the HRSC renders a decision, formally known as the Final Decision and Rate Order. All

Exhibit 4.1

Rate-Setting Process

Proposed Rates Issued

Within 45 working days from the receipt of the proposed rates, the hospital must notify the Commission and the Department of its intention to **Accept, Conditionally Accept,** or **Reject**

Accept: Hospital may appeal only a limited set of issues but receives a bonus of 1% of direct patient care costs.

Conditionally Accept: Hospital forfeits the 1% bonus but may appeal a wider but still limited range of issues.

Reject: Hospital may appeal any issue, but its rates are rerun on the efficiency standard.

Department of Health's Detailed Review Session

Must be scheduled within 45 working days following receipt of Appeal Document specifying exceptions.

Within 10 days, hospital permitted to submit additional information.

Department submits Detailed Review Report incorporating its recommendations to the hospital and Commission

Within 10 working days, hospital must respond to Department's recommendations by submitting Petition of Objections to Hospital Rate Setting Commission.

Within 140 working days, Commission renders decision.

Source: New Jersey Hospital Rate-Setting Commission, 1983 Annual Report.

decisions and meeting minutes are recorded and available for public inspection. Exhibit 4.1 depicts the steps involved in the rate-setting process.

In addition to approving hospital rates, the HRSC has other statutory responsibilities, including:

- reviewing generic issues affecting hospitals,
- reviewing and issuing bond offerings,
- establishing payer differentials, and
- considering DRG-specific clinical rate appeals.

By far, most of the HRSC activities focus on hospital rate schedule matters. As Exhibit 4.2 shows, over half of the issues that the Commission has reviewed since 1980 have related to hospital rate appeals and final reconciliations. Hospitals submitting objections to the rate schedule proposed by the DOH are reviewed by the HRSC for a final decision. In addition, the Commission reviews hospital-specific reconciliation amounts for approval. The methodology for calculating final reconciliation amounts was established in 1983 for reconciliations during 1980 through 1982. Thus, many hospitals began appealing their 1980, 1981, and 1982 final reconciliations in 1983 and 1984.

During the course of hospital rate hearings, matters arise that affect many hospitals and must be resolved in order for the DRG system to work effectively. For example, during 1983, the issue of how to reimburse hospitals for CAT scanners purchased after the DRG system became operational was raised. Many hospitals' rates did not reflect the capital costs for CAT scanners, since the rates were based on 1979 costs. The Commission worked closely with DOH on this issue. First, the Commission asked DOH to examine the question and to recommend a system-wide approach. Second, a public

Exhibit 4.2

Frequency of Agenda Issues Reviewed by the HRSC, 1980-1984

Agenda Issue	1980	1981	1982	1983	1984[a]
Hospital schedule of rate approval and final reconciliations	70 (71%)	79 (65%)	65 (50%)	126 (67%)	116 (71%)
Generic and methodological issues and other nonrate matters	9 (9%)	18 (15%)	41 (31%)	42 (22%)	44 (27%)
Bond resolutions	1 (1%)	11 (9%)	13 (10%)	10 (5%)	3 (2%)
Payer matters	19 (19%)	14 (11%)	7 (5%)	6 (3%)	1 (1%)
DRG appeal	0 -	0 -	5 (4%)	4 (2%)	0 -
Total	99	122	131	188	164
Number of hospitals under DRGs	26	59	98	90[b]	90[b]
Number of HRSC meetings	34	38	32	48	34

Source: New Jersey HRSC Annual Reports for 1980, 1981, 1982, and 1983.

[a]Estimated by the HRSC.

[b]After 1982, the HRSC counted multihospital systems as representing one hospital; thus 1983 and 1984 total hospital figures include four multihospital systems.

Note: Totals may not sum to 100% due to rounding.

hearing was held for interested parties to express their concerns. Finally, the Commission considered the DOH recommendations and comments from the public hearing before rendering a final decision as to the appropriate methodololgy for reimbursing hospitals. The approach was then applied to specific hospitals where such appeals has been raised.

Many rate appeals turn into nonrate matters. For example, one hospital with over half of its patients admitted for psychiatric care and an average length of stay over 17 days argued that the standard calculated for psychiatric care does not adequately reflect the type of psychiatric patients at their hospital. The Commission questioned whether this hospital should have remained under SHARE instead of being under the DRG system and referred this to the DOH for a recommendation.

In the first two years of DRG implementation, hospitals were acclimating themselves to the system, so these generic and nonrate issues did not arise very frequently. However, by 1982, when all New Jersey acute care hospitals were reimbursed under the DRG system and had become somewhat experienced with the system, practically one-third of the Commission's activities revolved around these system-wide issues. That year, however, was the peak year for such issues; in subsequent years, hospitals became more concerned with individual rate appeals and final reconciliations.

The HRSC also considers issues brought by payers. S-446 mandates that payment rates be equitable across payers. A payer is entitled to a differential if it can demonstrate "quantifiable economic benefits rendered to the institution or the health care system taken as a whole." Thus, the burden of proof is on the payer to demonstrate to the Commission's satisfaction the benefits of its cost control efforts inherent in its benefit structure, payment systems, or utilization review activities.

Payer matters received most attention during the first two years of DRG implementation than in later years. The payer controversy concerning the methodology for calculating the payer differential ensued between Blue Cross and the commercial insurers during 1980 and 1981 and did not reach final resolution until 1982. Between 11 and 20 percent of the agenda items dealt with payer issues during those years. Once the final payer differential was established, payer matters were no longer raised in HRSC meetings; however, payers continue to complain about the methodology.

Less than ten percent of the Commission's activities concerned hospital-specific bond offerings. When reviewing bond offerings, the Commission will issue, if appropriate, resolutions (Comfort Letters) to assure potential bond holders that a hospital's principal and interest costs for financing will be included in future reimbursement rates. The number of Bond Resolutions was highest in 1981 and 1982, when most of the hospitals had submitted CN applications for capital projects. The decrease in Bond Resolutions during 1983 and 1984 corresponds to a similar decrease in CN approvals during those years.

Finally, it is interesting to note how few DRG clinical appeals were brought before the HRSC. Under the Procedural and Methodological Regulations, a hospital or any other party may bring a DRG appeal to the HRSC on "any issue concerning differences in an institutional course of action or in patterns of medical practice, affecting a given DRG or a group of DRGs, which is likely to significantly affect one or more institutions." The intent of this regulation was to address innovations or differences in medical practice or advances in medical technology that benefit the health care system but may not be recognized through the DRG reimbursement system. In evaluating DRG appeals, the HRSC relies on the Physician Advisory Committee to provide medical

expertise in responding to medical and clinical issues. In part, the low number of DRG appeals is an artifact of the DOH's decision to delay consideration of appeals on the original set of 383 DRGs until the expanded set of DRGS was operational. This first set of DRGs, created by Puter Associates, contained certain codes that were too vague to be used for acute care inpatient coding (e.g., special screening for viral diseases), and certain procedures were not significant in terms of a patient's length of stay (e.g., X-rays). HCFA requested Puter Associates to create a new, expanded, set of DRGs tailored to ICD-9-CM codes. As a result, DRG appeals submitted in 1980 and 1981 were never processed. The new, expanded set of 467 DRGs was complete at the end of 1981.

4.3 Issues Addressed by DOH

As the rate-setting process evolved and hospitals were reimbursed on a DRG basis, several problems in the DRG system surfaced. DOH has resolved some of the issues and others are still on its agenda. The four most common issues raised by respondents include capital policy, the CN process, reimbursement for outliers, and reimbursement for uncompensated care. Each of these is discussed below.

4.3.1 Capital Policy

Many groups, including the DOH, suspect that the current payment system for capital expenses is too generous and has created incentives for some hospitals to overinvest in capital. Many of New Jersey's hospitals were built in the 1950s and 1960s and now require major replacements, renovation,

and expansion. In large measure, the perception that the DRG system was less stringent than the SHARE system provided hospitals a golden opportunity to fund their capital needs.

New Jersey's capital policy for fixed capital is designed to ensure that hospitals can adequately fund these capital needs. Recall that payment for fixed capital expenses (plant and equipment costs) is not prospectively reimbursed but is paid on the basis of actual costs through the Capital Facilities Allowance (CFA). The CFA is calculated for each hospital as the higher of: 1) depreciation plus interest, or 2) principal plus interest plus a contribution toward partial replacement cost. This system allows hospitals to make a down payment on future capital. As the Governor's Advisory Committee on Capital Expenditures for Health Care Facilities notes, the CFA "pays for tomorrow's capital needs through today's rates."[5] Furthermore, 100 percent of a hospital's capital costs are reimbursed. However, guaranteed payment for future capital expenses and depreciation and interest provides no incentives for hospitals to constrain costs. Thus, the reimbursement system for fixed capital is in direct conflict with the goal of controlling hospital cost increases.

To address this problem, Governor Kean established an advisory committee on capital expenditures for health care facilities in 1983. The Governor's Advisory Committee on Capital Expenditures for Health Care Facilities was composed of representatives from all interest groups, including the Departments of Human Services and Health, hospitals, the Public Advocate, major employers, insurance companies, and private health care companies. Their charge was to develop capital policy recommendations that "will promote

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[5]Making Less Do More, Report of the Governor's Advisory Committee on Capital Expenditures for Health Care Facilities, December 1984.

effective yet affordable health care facilities." The committee also recognized that approvals of capital projects are considered within a regulatory environment that also needs improvement.

The advisory committee's final recommendation to the Governor was submitted in December 1984.[6] Among five proposals for change, the committee favored an option that would provide greater balance between health planning and reimbursement controls. Specifically, the committee suggested limiting the focus of the health planning process to the control of the supply of beds and services and at the same time shift from the pass-through reimbursement for fixed capital to a DRG-based prospective payment for capital. This recommendation uses the planning process to control the size of the health care system while using the reimbursement method to provide incentives to reduce the unit capital cost of health care delivery.

While the Governor has yet to endorse the committee's recommendations, the Department of Health is treating the option for improving capital policy very seriously. Current bills in the legislature seek to give the Commissioner of Health the legal authority to close underutilized services, beds, or even hospitals. Similarly, DOH is currently assembling a Capital Policy Work Group composed of DOH staff and selected Advisory Committee members to consider the implementation of the Advisory Committee's recommendations.

The DOH Capital Policy Work Group expects to develop a satisfactory methodology over the next year. However, proposals to the Procedural and Methodological Regulations will appear, at the earliest, sometime in 1987. While a draft methodology will be available in time for the 1986 Procedural

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[6] Ibid.

and Methodological Regulations, DOH staff noted that any change in the capital policy would require gaining support from many interest groups, including the New Jersey Hospital Assocation (NJHA) and the Medical Society of New Jersey (MSNJ). Further, the HCAB must review the proposed changes.

DOH's main concern is developing a methodology that will not cost more in the short run. At the same time, they must deal with the issue of whether prospective rates for capital would allow the HRSC to guarantee that hospital rates will adequately pay for the service of any outstanding debt. The HRSC is concerned about violating the terms of Comfort Letters issued for hospitals. The state cannot afford to have hospitals default on their bonds, because over 90 percent of hospitals' bonds are financed through the New Jersey Health Care Facilities Financing Authority (HCFFA). If hospitals default, New Jersey's credit could be negatively affected.

It is important to note that hospitals' access to capital markets has greatly improved under DRGs. The DRG system had a homogenizing effect on hospitals, making all hospitals look alike in regard to the general determinants of hospital credit (e.g., market position, regulatory environment, and guaranteed viability). With few exceptions, bond ratings for all hospitals went into a middle A range.[7] Urban hospitals, in particular, benefited from the policy to reimburse uncompensated care. While hospitals' improved bond ratings cannot be fully attributed to the DRG system, the barrier to capital markets that hospitals previously encountered is absent.

4.3.2 Certificate of Need Process

The Certificate of Need (CN) process is intended to control the

[7] D. Keller, Effects of New Jersey's DRG Hospital Reimbursement System on Hospitals' Access to Capital Market, HRET Report #6, June 1983.

supply of beds and services and to review all capital expenditures. Any hospital or health care facility planning on providing a new service or capital expense greater than $150,000 must submit a CN to the Commissioner of Health for approval. The Commissioner's decision is based on the local HSA and SHCC review of the CN application. Both groups attempt to ensure that the CN is consistent with the State Health Plan.

As evidenced in Exhibit 4.3, the demand for hospital CN approval increased substantially between 1979 and 1981. The majority of the CNs have been for construction and renovation of existing plant and equipment, rather than for expansion of new beds or services. It should be noted that there is typically a three- to five-year lag time between CN approval and the point where a hospital's rates begin reflecting the increased principal and interest. Furthermore, the availability of the Working Cash Infusion allowance provided hospitals, for the first time in years, the opportunity to wipe out their old debt and enter the bond market to fund CN-approved projects. Indeed, these factors contributed to the dramatic rise in the total cost for hospital CNs. Prior to 1980, the total cost for hospital CN approval did not exceed $205 million. In contrast, total costs for hospital CNs more than doubled during the first three years of DRG implementation. Hospital CN approvals totaled $302 million in the first year of DRG implementation alone, a 50 percent increase from the previous year. By the second year of DRG implementation, CN approvals skyrocketed to $575 million.

CN costs began decreasing in 1983, primarily because most hospitals had already submitted their plans for construction and renovation. In addition, the DOH instituted an experimental CN procedure in 1984 for one of the largest counties. Most hospitals in Essex County volunteered to submit their CNs to DOH at the same time. In this way, DOH could review the CN

Exhibit 4.3

Hospital CN Approvals, 1971-1984
(in millions)

Year	$
1971	14
1972	144
1973	121
1974	140
1975	58
1976	47
1977	120
1978	203
1979	199
1980	302
1981	575
1982	351
1983	226
1984	68[a]

Source: Center for Health Facilities Research.

[a]Does not include Essex County, which has pending applications totaling about $300 million.

applications on a county-wide basis and make decisions on health care delivery for the county as a whole. Thus, all CNs submitted by hospitals in Essex County were batched in 1984 for review in 1985. It is for this reason that hospital CN costs are only $68 million in 1984--Essex County CNs are not included in the 1984 figure. As a result, the DOH expects to review over a half a billion dollars worth of CNs in 1985, of which $320 million represents hospitals in Essex County.

Each CN increases capital costs that the DRG rates must cover and, in turn, increases operating costs. The CN process does not address whether the rates will cover these expenses. Some respondents criticized this apparent lack of "harmony" between the planning and the rate-setting process.[8] It is possible, they maintained, that a hospital could receive approval for a capital project but not receive the increase in DRG rates necessary to cover operating expenses for the project. While the DRG rates, which will include all operating expenses, pose some self-limiting constraints on demand for capital, the rising number of CN applications does not suggest this constraint is yet binding.

Some respondents suggested combining the CN responsibilities with the rate-setting process. In this way, the staff who set rates would also recommend decisions about CN applications. This might create stronger incentives for hospitals to plan capital projects more carefully. The DOH made a recent attempt to link rate-setting and the CN process in its proposed 1985 Amendments to the Procedural and Methodological Regulations. The proposed change attempted to limit capital-related hospital appeals under the conditionally accept option to those situations where cost savings had been

[8]M.J. Kalison, Statement of Principles, unpublished and undated.

identified in the hospital's CN application. Registered comments claimed it inappropriate to consider for appeal only CN projects that would result in cost savings. Certain projects, such as acquiring Nuclear Magnetic Resonators, are necessary but would not result in cost savings. The DOH withdrew this proposed regulation regarding the CN review process and is continuing its review of the impact of the CN process on the rate-setting system.

In addition to linking the rate-setting process to the CN process, respondents raised concerns about the current growth in hospital diversification and corporate restructuring. New corporate entities have come into existence for which the DOH has no legal definition or precedent for CN review. For example, a clinic spun off from a hospital is a separate non-profit entity on paper but in practice is part of the hospital. The proliferation of these new forms of corporate bodies, and uncertainty regarding their legal classification for regulatory purposes, is generating considerable criticism regarding the stringency of the CN process and its consequent effectiveness as a regulatory tool.

In response to declining length of stay under DRGs, the numbers of nursing home and home health agency applications have increased. Following press reports of nursing home bed shortages, over 100 nursing home applications were submitted for CN approval within the last year alone. So many home health agency applications have been received by DOH that the department may begin batching applications monthly. Many of these nursing home and home health agency applications have been submitted by hospitals, which has generated widespread controversy over competitive reimbursement practices as applied to hospital-based and free-standing nursing homes and health agencies. The rise in nursing home and home health care agency

applications is not surprising. One incentive under the DRG system is for early discharge, and, given the scarcity of nursing homes in New Jersey, it is not surprising to see hospitals diversify (vertically, maintaining control over a complete spectrum of patient care activity).

4.3.3 Reimbursement of Outliers

All patients are assigned to a DRG category on the basis of the information reported on the Uniform Bill-Patient Summary (UB-PS). However, some patients' cases are deemed outliers and were originally reimbursed according to controlled charges and reconciled to approved rates at year end. These outliers fell into eight categories:

- low length of stay (LOS) cases,
- high length of stay (LOS) cases,
- patients who died in the hospital,
- patients who left against medical advice (AMA),
- patients whose cases are atypical and who do not consume comparable resources as other patients in the same DRG category,
- low volume of patients in a DRG in a given hospital (less than six cases),
- patients who were transferred, and
- patients admitted and discharged on the same date (but not Same Day surgery cases).[9]

Statewide, close to 40 percent of all cases are outliers. As a result of this high percentage of outlier cases, the state's ability to project total hospital reimbursement has been hindered. Further, DOH has claimed that some hospitals "game" the system by maximizing revenue for outliers by

[9]Same Day Surgery (SDS) cases are billed on an outpatient basis according to controlled charges.

skewing charges.

The DOH has recently addressed these outlier problems by changing outlier classification and reimbursement in the 1985 Amendments to the Procedural and Methodological Regulations. Reimbursement of outliers will no longer be based on controlled charges but on a DRG rate and/or a per diem amount. The amendment also reclassifies outlier cases, except high and low length of stay outliers, into the appropriate DRG category. Thus, these patients will not be considered outliers for payment purposes; only high and low length of stay cases will be considered outliers for payment purposes. In order to accomplish these changes, the DOH must recalculate each hospital's base year average cost per case and peer group standard cost per case.

Reimbursement for patients previously classified as outliers will now be as follows:

- Deaths and AMAs will be paid the DRG rate for the appropriately assigned DRG category.
- DRGs previously defined as low volume may now be eliminated due to the reclassification of deaths and AMAs. For those DRGs still considered low volume (now fewer than four cases), payment will be based on the peer group standard for the DRG.
- Payment for atypical cases, or clinical outliers, will be based on a hospital's historical base year (1982) cost.

If any of the above cases are also high or low length of stay outliers, they will be paid according to the outlier payment methodology, described below.

The revised outlier methodology for reimbursing high and low length of stay patients is based on the DRG rate and/or a per diem amount. The per diems are hospital specific and are calculated from each hospital's base year costs. The per diem methodology is designed to be "budget neutral," in that it is not intended to alter significantly the approved costs of a hospital based on its 1982 base year casemix and volume. Each DRG will have both a high and a low per diem, as follows:

$$\text{High Outliers Per Diem} = \frac{(\text{Total High Outlier Cost} - \text{Inlier Rate}) \times \text{Number of High Cases}}{\text{Total High Outlier LOS} - (\text{SNF} + \text{ICF days})}$$

$$\text{Low Outlier Per Diem} = \frac{\text{Total Low Outlier Patient Cost}}{\text{Total Days}}$$

Hospitals that have fewer than four high outlier cases or four low outlier cases will be assigned a standard peer group per diem to the DRG. Payment of high and low outliers will be calculated accordingly:

High LOS Outlier Rate = DRG Rate + (Outlier Days x High Per Diem)

Low LOS Outlier Rate = Low Outlier Days x Low Per Diem

Patients who are transferred to another acute care facility will be assigned to the appropriate DRG and reimbursed the low length of stay per diem. However, if the per diem amount is greater than the payment rate for the DRG, the lower amount will be paid.

This revised methodology of reimbursing and classifying outlier cases will encourage hospitals to align charges to reflect actual costs. Perhaps more important, the methodology provides the state with predictability and prospectivity. This latter benefit is particularly crucial given the state's concern with the HCFA waiver. The amendment will provide DOH with predictability of future cost projections, which must be monitored throughout the waiver period. The major risk with this change to a per diem rate, which the DOH recognizes, is the inherent incentive for hospitals to keep a patient in the hospital longer than necessary if the per diem is favorable. However, similar incentives to keep patients just beyond the high trim point existed under the original outlier reimbursement methodology. The state will pay particular attention to changes in length of stay, and the Peer Review

Organization (PRO) should deter unnecessary lengths of stay. The DOH also notes that changes in the level of per diem reimbursement may be required in future years if a pattern of increased length of stay occurs.

The billing for outliers could become extremely complex for hospitals. As a result of this reimbursement change, hospitals must be prepared to process 934 per diems for 467 DRG rates. Presently, there is no uniformity among hospitals for processing bills. Hospitals with large in-house computers or contracts with outside data processing vendors will be able to convert to the outlier per diem rate methodology without significant cost or confusion. It remains to be seen what happens to those hospitals without such data processing capabilities. There was a four-month lead period during which time hospitals, as well as intermediaries, could resolve any questions or problems. Although actual implementation of the outlier billing methodology did not begin until April 1, 1985, the rates issued were retroactive to January 1, 1985. Hospitals may raise any problems with the rate or methodology to the HRSC under either the accept or the conditional accept option.

While this change in the computation of outlier rates is an important change in terms of day-to-day operations, it does not address the fundamental issue of defining the proper role for outliers in the New Jersey system. As has been pointed out previously, the percentage of outliers in New Jersey, prior to 1985, was between 30 and 40 percent. This is a much larger percentage than the six-percent outlier proportion found in the federal PPS. New Jersey did not originally intend to have such a high outlier percentage. System design features, however, made the large number of outliers more or less inevitable, even if not necessarily desired.

In the first place, there is evidence of variation within DRGs.

Susan Horn, for instance, has shown that, in selected DRGs, the DRG category explained only between 21 and 53 percent of the variation in hospital charges.[10] As a consequence, the differential between actual costs and the DRG rate is potentially quite large. However, if averaged across a large number of cases in a DRG, the differences cancel out, as Medicare's PPS system demonstrates. Moreover, the fact that PPS is concerned only with Medicare patients eliminates an important source of potential variation in the resources used per patient.

However, the degree of variation within DRGs is very important within the context of an all-payer system. To deal with this problem, New Jersey narrowed the range of circumstances under which the DRG rate schedule was in fact used directly to determine the reimbursement. While this increased homogeneity within DRGs, it also increased the percentage of outliers. As the percentage of outliers increased, the percentage of revenue actually governed by the DRG system decreased. By 1982, over 30 percent of all patients and 45 percent of all revenues were treated as "outliers."[11] This not only diluted the desired incentives, but in some cases it created incentives directly the opposite of what was intended. For a given "low trim" outlier, a hospital has an incentive to keep the patient hospitalized long enough to qualify for the standard rate, since a patient with a length of stay just inside the low trim point is the most lucrative type of patient. On the other hand, depending on a hospital's marginal cost position, there may be

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[10] S. Horn and S.D. Sharkey, "Measuring Severity of Illness to Predict Patient Resource Within DRGs," Inquiry, 20:314-321, Winter 1983. Other studies have found that, within selected diagnoses, the explained percentage of variation in hospital costs is even lower.

[11] S. Weiner, R. Greene, and H. Sopolsky, "Sounding Board: The Theory and Practice of Implementation," October 1984.

incentives to keep patients extra days once the patient's stay has exceeded the "high trim" point.

One consequence of the large number of outliers is that utilization review starts to assume the same functions it has under a per diem system. Thus, one of the main advantages of a per case reimbursement system is lost. A second, and in some ways more profound, problem is that hospitals with systematically different lengths of stay within DRGs might receive windfalls or penalities in a perverse fashion. A hospital with a higher than average length of stay within a DRG will have a greater percentage of its patients classified within the low trim point than the hospital with the systematically lower length of stay. At the high end, a hospital with a systematically longer length of stay is more likely to receive additional outlier reimbursement for a case than is a hospital that has systematically lower lengths of stay.

As set forth in a series of appeals to the HRSC by one hospital, the effects on any given hospital can be quite significant. In these appeals, one hospital argued that a better rate-setting approach would be to use DRGs with a much lower proportion of outliers to determine the overall revenue cap, but then to allow hospitals to set individual charges within that revenue cap to better reflect differences among individual patients. Use of "controlled charges" as opposed to DRG rates was an issue that surfaced during the initial design of the DRG system. The issue was decided for New Jersey when HCFA made direct DRG rates a condition of the waiver.

4.3.4 Uncompensated Care

As is well known, the solvency of New Jersey inner-city hospitals depended on including uncompensated care as an element of reimbursable cost.

Two groups are included in hospitals' uncompensated care--those who do not pay their bills (bad debt) and those who are unable to pay and therefore receive free or below-cost services (charity care). In practice, it is often difficult to distinguish between these two groups. New Jersey health officials estimate that the state's uncompensated care costs total close to $200 million annually. Under New Jersey's all-payer DRG system, the costs of uncompensated care are spread proportionately among all payers, the largest of which is the federal government. Federal payments for services rendered to Medicare patients and joint federal and state payments for services rendered to Medicaid patients account for approximately 50 percent of all hospital revenues in New Jersey. Under the state's all-payer system, the federal government pays for half of the $200 million uncompensated care costs. The other half is spread primarily among Blue Cross and commercial insurers, with about six percent to self-payers.

New Jersey's DRG system has been credited with restoring fiscal solvency to the state's urban hospitals and sharing the burden of uncompensated care. Further, the system has increased access to hospital care for the medically needy and, for the most part, avoided the development of a two-tiered system of inpatient care. In all, including uncompensated care as a reimbursable cost, built into the DRG rates, has provided financial security for hospitals at a time when urban hospitals were close to disaster and offered inpatient health care for the medically indigent in a state with no program for the medically needy.

Despite these accomplishments, critics claim that the uncompensated care provision provides few incentives to hospitals for pursuing their bad debt, except according to the guidelines specified in the audit regulations. Hospitals that might otherwise seek partial payments for bad debt are not

doing so. Similarly, hospitals are not making efforts to insure that Medicaid-eligibles do indeed register for the program. In some cases, hospitals have failed to verify their claims for uncompensated care adequately: hospitals are missing files and other documentation to prove the amount of uncompensated care provided. In other cases, hospitals have failed to follow credit and collection policies, which they are required to establish. The issue of recovering bad debt is not trivial--approximately two-thirds of uncompensated care is attributable to bad debt.

The DOH recently developed a methodology for auditing hopsitals' efforts to collect their bad debt. The methodology emphasizes the importance of documentation and reducing the number of missing files. Proof of compliance with preadmission procedures (e.g., determination of third-party liability, qualification of medically indigent, efforts to enlist patients in reimbursement program), and compliance with postdischarge follow-up procedures (e.g., mailing of billing statements, follow-up letters, telephone contact) are required. After accounting for available documentation, missing files, and the exceptions to compliance with preadmission and postdischarge procedures, a penalty schedule is applied to each hospital's uncompensated care. Because of the strictness of these compliance features, it is likely that even hospitals with relatively good collection efforts will have some part of their uncompensated care costs withheld.

Uncompensated care audits are conducted by the fiscal intermediaries who have recently completed the 1982 audit. Results of the previous years' audits and the 1982 audit, however, have not yet been tabulated. In addition to developing the methodology and obtaining approval from the HRSC, high

turnover among DOH audit staff delayed implementation and analysis of the audits. The effectiveness of DOH's uncompensated care audit has yet to be determined.

Attempts to use uncompensated care audits, however, do not address more fundamental problems in the New Jersey approach to uncompensated care. These include:

- the development of a two-tiered system for primary care;
- inequitable, and possibly noncompetitive, rates for hospitals with high uncompensated care; and
- dependence of the system on the federal waiver.

It is important to note that New Jersey's all-payer DRG system addresses the most expensive component of health care--inpatient acute care services. However, the patients contributing to the state's uncompensated care costs use hospital services (primarily emergency room services) for their routine medical care, instead of primary care physicians. Furthermore, the hospitals with large amounts of uncompensated care are typically the teaching hospitals in the inner cities. In the absence of funding for primary care for the medically needy, these patients will continue to seek routine medical care in the emergency rooms of teaching hospitals. Without significant state action toward changing the motivation of the medically indigent to link up with a primary care physician, the potential for a two-tiered system exists. Furthermore, reimbursement for uncompensated care is hospital specific. The payers who insure patients using the same hospital as those receiving charity care bear the costs for uncompensated care. Observers have argued that re-

sponsibility for uncompensated care should be system-wide and not limited to users of specific hospitals.[12]

In addition to the above concerns, the state's dependency on the continuation of a federal waiver to pay a proportionate share of uncompensated care costs was disturbing to some respondents. Many felt that, if the waiver had not been granted for another three years, or if it is rescinded at any time, New Jersey would stand to lose an estimated $100 million that would have covered uncompensated care. However, since the state would receive more money under the federal PPS system, theoretically the excess could be used to pay for uncompensated care. In practice, the state is dependent on the waiver to guarantee the desired distribution of payment among hospitals. Payments distributed by PPS would not necessarily follow the needs for uncompensated care reimbursement. Indeed, there are demographic reasons for assuming that PPS "surpluses" would have a very different distribution than do needs for uncompensated care allowances. Thus, New Jersey is dependent on the federal waiver to maintain hospital viability and equity.

The loss of the federal waiver would have returned New Jersey to the issue of helping hospitals pay for bad debt and cover the cost of care for the medically indigent. Hospital and state respondents suggested that the state consider funding mechanisms for uncompensated care that do not depend on the continuation of a federal waiver. The most common suggestion was that an uncompensated care pool be established to which payers and the state contribute money. However, the state is not planning on developing such a fund at the moment.

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[12] L. Rosen, S. Fillebrown, N. Weisfeld, On the Frontier: New Perspectives on New Jersey's Hospital Payment System, The Center for Health Facilities Research, February 1985.

Instead, proposals for a Medically Needy program are under serious consideration. New Jersey is one of 20 states that do not have a Medically Needy program. Such a program would pay for some of the state's uncompensated care costs by extending Medicaid benefits to individuals whose incomes do not meet the eligibility standards but whose health care expenditures render them eligible. Adopting a Medically Needy program is one step toward alleviating the dependency on the federal waiver. Adding an uncompensated pool to a Medically Needy program would further improve the market position of hospitals with large shares of uncompensated care.

CHAPTER 5

IMPLICATIONS FOR THE MEDICAID AGENCY

The considerations given to establishing an all-payer DRG system are substantially different from those that must be addressed when Medicaid is the only payer reimbursing on the basis of DRGs and being regulated by the state. Medicaid agencies operating within an all-payer system will experience different impacts than agencies not operating under such conditions. The most important difference is control over budget. Administrators in an all-payer system will be more concerned about the overall impact of decisions than the impact on the Medicaid budget alone. Similarly, cost shifting, uncompensated care, and hospital viability receive special attention in an all-payer system. In contrast, a Medicaid-only system has much greater latitude to achieve a more favorable payment position since its actions affect only a small portion of hospital revenue. Thus, when considering the impact of DRGs on the New Jersey Medicaid program, it is critical to consider the distinction between those issues that are generically related to DRGs and those that are a function of participating in an all-payer system.

While DOH established the mechanisms for DRG implementation for all payers, the Medicaid agency in the Department of Human Services (DHS) found itself in a new position compared to its previous experience under SHARE. Under SHARE, Medicaid cost containment was a high priority. Under DRGs, DHS had little, if any, control over its rates. Medicaid became "just another payer" in an all-payer system. Further, the DRG system itself created some new concerns for the Medicaid agency. Section 5.1 addresses the particular issues that Medicaid confronted as one of many payers. Section 5.2 discusses the hidden costs and potential savings from participating in the DRG system.

Finally, Section 5.3 outlines other special projects being pursued by the Medicaid agency to contain health care costs.

5.1 Medicaid In An All-Payer System

As Medicaid soon learned, operating under an all-payer system radically changed the agency's role with regard to Medicaid hospital rates. Prior to the all-payer DRG system, per diem rates were negotiated for only two payers--Blue Cross and Medicaid. Hospitals could apply for a retrospective review of overspending in order to receive additional reimbursement from Blue Cross, but the rates for Medicaid were considered final and not subject to adjustment. Moreover, DOH was very sensitive to Medicaid problems and did not have to worry about equity to other payers. Under the all-payer DRG system, DOH was more concerned about the impacts on other payers, and Medicaid had to confront the hard fact that the agency was now just one of many payers; in fact, only about 12 percent of hospital revenues are from Medicaid. The special considerations normally afforded the agency were no longer warranted. DOH had other, much larger, payers to be concerned about--Medicare's share of inpatient services was close to 40 percent. The Medicaid staff likened the experience of becoming "just another payer" to the reactions of Blue Cross and commercial plans to government programs.

The Medicaid agency's loss of position and power relative to other payers caught the agency off guard. Based on the its lengthy experience in working with DOH in the expenditure of state funds, the agency thought that Medicaid staff would have more input into the design and implementation of the DRG system than they actually had. While Medicaid staff acknowledge that their contribution was no more than that by any other payer, some DHS funds were used in the design of the system, which led the agency to believe that

more of their input would be considered and solicited. Medicaid staff also expressed disappointment over their lack of participation in the original design of the DRG system and the current tendency of DOH, as perceived by Medicaid staff, to exclude Medicaid from policy decisions. Staff cite several instances in which Medicaid "was not heard by DOH."

One example that illustrates Medicaid's point concerns an inconsistency in the treatment of utilization review costs in the DRG rates. Apparently, Medicaid was under the impression that utilization review costs for Medicaid were not included in the DRG rates; DOH, hospitals, and other payers were under the assumption that utilization review costs for all payers, including Medicaid, were included in the DRG rates. Medicaid staff claimed that there was potential for duplication of payment, since Medicaid pays the same DRG rate as other payers yet also pays a separate fee to PSROs for utilization review. This potential problem was brought to DOH's attention several years ago by Medicaid staff, but no action was taken. Recently, the ambiguity as to whether Medicaid UR costs are in the DRG rates was challenged by a group of hospitals because of a change in delegation status for hospitals. Due to the potential duplication of payment, the Inspector General's Office is currently looking into the matter. However, Medicaid respondents claim that they identified the problem issue years ago and, had DOH taken them seriously, the problem would have been avoided.

Medicaid staff also note their difficulty in participating in the rate-setting process. While Medicaid staff regularly attend the hospital rate-setting meetings, appeal documents and agenda items are often not available to the Medicaid staff prior to HRSC meetings. Medicaid staff commented that the New Jersey Hospital Association and the Public Advocate always seem to have these documents prior to the meetings. Only until

recently have Medicaid staff received these documents in a timely manner. Acquiring the agenda items and other documents before each HRSC meeting is a "major accomplishment," according to one Medicaid staff member.

In part, the isolation experienced by Medicaid may be a function of manpower and, in part, a function of the particular nature of New Jersey's Medicaid department. Initially, Medicaid had only one person involved with the DRG system, as compared to the DOH staff of 18. Medicaid now employs three staff whose primary responsibilities are hospital payment but also include ensuring that the intermediaries pay Medicaid claims. Given these routine claims duties and the other special projects for which they are responsible, it is difficult for staff to become as intimately involved with the DRG system as are DOH staff. It is somewhat surprising that Medicaid has such a small staff concentrating primarily on hospital reimbursement issues, since more than one-third of Medicaid's budget is spent on inpatient services. However, the state has a no-growth personnel policy, which makes it difficult to increase the number of Medicaid staff.

It is unclear whether adding more staff would result in increased participation by Medicaid. Medicaid has a long history as a "silent partner" in the DRG system. From the beginning, Medicaid officials seemed indifferent to the politics of DRGs and took little initiative on their own. Medicaid staff failed to testify at early hearings about S-446 and were largely silent or absent throughout the adoption process. In general, Medicaid staff appear to follow DOH's lead--to the point of allowing DOH to prepare waiver requests and state plan amendments. Medicaid's request for a waiver during the first three years was written by DOH. The recently submitted state plan amendment was simply a copy of DOH's second Medicare waiver request.

Medicaid's behavior is quite remarkable in view of the fact that the DRG system increases Medicaid expenditures. Despite Medicaid's lack of involvement, DOH staff claim that Medicaid is no less involved than other payers. Nevertheless, Medicaid staff remain dissatisfied with their role in the system.

In addition to losing its position and power relative to the other payers and its lack of involvement in policy decisions, Medicaid is subject to some federal rules that do not apply to the other payers. For example, Medicaid may not benefit as much from retroactive decisions made by the Hospital Rate Setting Commission as do other payers. Because of federal rules, if the HRSC changes rates retroactive to one year, Medicaid can apply the rate change to the months in the last calendar quarter only, while other payers can apply the rate change to the complete year. Changes in rate structure are not the only items on which the HRSC may make retroactive decisions. Changes in the payer factor, the method of calculating UR costs, unbundling and rebundling policy, and so forth, may become the subject of retroactive decisions for which Medicaid may reap only partial benefits. On the other hand, these kinds of retroactive decisions are not made often, and in some cases the change is not beneficial, so Medicaid is better protected than the other payers.

DHS staff also point to the scope of service coverage required of Medicaid by the federal government as compared to the service coverage of other payers. Medicaid must provide the full range of federally mandated services to Medicaid recipients and may also include a number of optional services. Other payers are under no such restrictions and cover fewer services. The difference in service coverage is highlighted by being part of an all-payer system. While not stated explicitly, Medicaid staff implied that

the agency should receive some form of recognition or compensation for their coverage of a more comprehensive range of services than the other payers cover.

5.2 Medicaid in a DRG System

The impacts of the DRG system on the Medicaid agency are inexorably tied to the all-payer nature of the New Jersey system. It is difficult to separate the all-payer impacts from the DRG impacts. While the previous chapter identified specific issues requiring refinement in the DRG system (e.g., reimbursement for capital and outliers), these issues affect all payers, not just Medicaid. However, there are some problems with the DRG system that are peculiar to Medicaid. These include billing on a DRG basis, changes in reimbursement for outpatient care, rebundling of nonphysician services and supplies, unbundling part of the physician component, a proposed Medically Needy bill, and the utilization review process.

For a Medicaid agency accustomed to paying on a per diem basis, the transition to a DRG system is difficult, since it requires payment based on the case. Consequently, Medicaid did not actually pay according to DRGs until March 1983, three years after DRG implementation. The fiscal intermediaries developed the billing system for all the other payers before completing the billing system for Medicaid. To account for the potential discrepancies in payments between the two systems, Medicaid held quarterly hospital reconciliations prior to 1983. Medicaid compared what they paid on the per diem basis to what they would have paid on the DRG basis. The volume of cases by DRG and the price per case were used to determine if total expenditures were higher than they would have been under DRGs. If total expenditures were higher, the per diem was reduced; if total expenditures were lower, the per

diem was increased. Medicaid staff explained that, after two quarterly reconciliations, total expenditures were relatively close to what Medicaid would have paid under DRGs. As a result, only minor adjustments to the per diem were necessary until the actual DRG billing system was in place in March 1983. Unfortunately, Medicaid still maintains many of its records on a per diem basis, which restricts its ability to analyze expenditure changes.

5.2.1 Outpatient Payment

While Medicaid was adjusting itself to paying on a DRG basis for inpatient services, outpatient costs skyrocketed. One Medicaid staff member estimated that outpatient expenditures were $44 million in 1980 and would double to $87 million in 1985.[1] Prior to the all-payer DRG system, Medicaid used Medicare principles to pay for outpatient services--the lower of costs or charges. However, under the DRG system, Medicaid pays "controlled" charges whereby the HRSC sets each hospital's outpatient rate. The hospital then sets the actual charge within a 20 percent corridor. For example, if the HRSC determines that a given hospital can charge $100 for an outpatient visit, the hospital can set an $80 charge for services rendered through their clinic and a $120 charge for emergency room care. And, as elsewhere, Medicaid patients are heavier users of emergency room services because they do not have a physician for primary care. Since utilization of outpatient services has not changed significantly, Medicaid may be spending more money for the same amount of services provided. While far from formalized, an outpatient utilization review procedure is being considered by Medicaid to ensure the medical

[1]Medicaid staff claim that outpatient utilization had remained relatively stable during this five-year period; however, data gathered from intermediaries and from Medicaid Annual Reports suggest about a three percent annual rate of growth in outpatient utilization during 1979-1983.

necessity of outpatient services. Medicaid would be the first payer in New Jersey to institute such a formal UR procedure for outpatient care.

5.2.2 Rebundling of Physician Services and Durable Medical Equipment (DME)

Another DRG system process that costs Medicaid more money is the rebundling of some nonphysician services and supplies. Some nonphysician services and supplies are no longer subject to provider agreements between the vendor and Medicaid. The hospital is now the prudent buyer of such supplies and services, which are rebundled into the DRG rate as trailer charges to the hospital bill. As a result, Medicaid pays more for these rebundled services and items than they paid under SHARE. Medicaid believes it has lost a significant amount of control regarding the price structure for these services. For example, if Medicaid previously had an agreement with a medical supply house for durable medical equipment (DME) to pay $150 for a prosthesis, that agreement is now null and void. The hospital now arranges for such items, often at higher prices. The prosthesis may cost $300, and a hospital-specific mark-up for hospital overhead is also added, making the total cost for a prosthesis for which Medicaid used to pay $150 now cost close to $500.[2]

Not only does the rebundling of some nonphysician services and supplies cost Medicaid more money, but it affects the Medicaid agency more than the other payers. While rebundling applies to all payers, Medicaid provides a more comprehensive range of services than the other payers and is therefore affected more by the rebundling. Furthermore, Medicaid is subject to a state regulation concerning durable medical equipment to which the other payers are not subject. Medicaid must refurbish and recycle DME that is used

[2]Because of Medicaid's concern over the mark-up factor, Medicaid refused to pay the mark-up factor in 1984. As of 1985, the mark-up factor was rescinded for all payers.

by one Medicaid patient for the next patient. Additional recycling costs are incurred by Medicaid that are not incurred by the other payers.

While reimbursement for outpatient care and rebundling of non-physician services and supplies are increasing Medicaid expenditures, unbundling of some physician specialty services will save Medicaid money.[3] As part of the Medicare waiver, DOH was required to unbundle some physician specialty services from Part A to Part B in January 1985. However, DOH unbundled these services only for Medicare. At the time, Medicaid and the other payers were ill-prepared to pay the physician component on a fee-for-service basis. Blue Cross cannot legally pay if the physician service is separately identified on the hospital bill; Blue Shield is not allowed to pay for physician services at all. Medicaid and commercial payers were not set up to process such physician claims by January 1985. However, Medicaid is planning to unbundle the physician component by July 1, 1985. When this is done, physician specialists will have to conform to Medicaid's physician fee schedule, which ranks among the lowest in the nation--ranging from $7 to $21 for office visits. Indeed, Medicaid is very likely to save money by unbundling physician specialty services. Other payers, however, are likely to experience increased costs. Constrained by Medicare and Medicaid fee schedules, specialists will simply increase their rates to the other payers.

Unbundling physician specialty services may decrease access to some services for Medicaid patients. The Medicaid physician fee schedule is extremely low, causing limited access to primary care physicians.[4] Decreasing access to specialty services is now a potential threat; maternity and

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[3]The specialist services to be unbundled primarily include those of radiologists, anathesiologists, and pathologists.

[4]Medicare's fee schedule is higher.

maternity-related services are of particular concern. The physician's billable charges would be limited to the Medicaid fee schedule, which is less than the reasonable compensation that could be earned outside of a hospital. As such, physicians may be reluctant to continue providing these services, and hospitals may find it difficult to staff the clinics. The hospital may thus be forced to reduce services, which would curtail the availability of these critical services for Medicaid patients. Medicaid has tried to increase the physician fee schedule in the past but has never been successful. Medicaid has never had a surplus in its budget to allow such an increase. Monitoring the access to primary care physicians in addition to specialists is now warranted.

5.2.3 Medically Needy Program

One factor that might force the legislature to increase the physician fee schedule is the adoption of a Medically Needy program covering individuals whose incomes are too high to meet the needs standards but who become eligible after account is taken of their health expenditures. For the first time in years, a Medically Needy program has been seriously considered by the legislature. If the Medically Needy bill passes the legislature, the program would be housed in and administered by the Medicaid agency. The Medicaid physician fee schedule would also be applied to Medically Needy patients. However, critics point to the access problems experienced by Medicaid patients and suggest that the same access problems would be experienced by Medically Needy patients. The legislature may thus be forced to raise the fee schedule in order to ensure access for both Medicaid and Medically Needy patients.

It is also interesting to note that the version of the Medically Needy bill that has acquired the most support is a version without any inpatient or outpatient hospital coverage. Most observers assumed that HCFA would grant a waiver for both inpatient and outpatient services, thus rendering any hospital coverage duplicative. The uncompensated care component in the DRG rates already cover individuals who would become eligible for the Medically Needy program. However, since HCFA granted only the inpatient waiver and is still considering the outpatient waiver, the legislature, with the support of DOH, may include provisions for outpatient services.

Medicaid staff agree that a Medically Needy program is warranted, but they are concerned about the effects on the Medicaid budget. If the federal government places a cap on the Medicaid budget and the legislature does not allocate sufficient monies for the Medically Needy program, the shortfall will inevitably come from the Medicaid budget. If this scenario emerges, Medicaid will have to reduce services or cut back benefits to Medicaid recipients.

5.2.4 Utilization Review

The DRG system also requires utilization review (UR) to be performed on all inpatients, including Medicaid recipients. The focus of the UR function is to determine the medical necessity of admissions and to ensure continued staff certification and appropriateness of level of care (i.e., rehabilitation facility, nursing home, home agency, outpatient services, etc.). The UR program for Medicaid has undergone quite a bit of change since DRG implementation. When the all-payer DRG system was implemented, there were provisions in the enabling legislation that allowed payers to contract directly with a review organization (i.e., PSRO) for UR. Medicaid, however,

did not take advantage of the option and instead directed hospitals to conduct review on their own Medicaid claims on a "delegated" status. Under this arrangement, local PSROs monitored hospitals' performance on a quarterly or monthly basis. The cost of UR review was evenly split between Medicaid and the federal government.

With the passage of OBRA in 1981, Medicaid again was given the option of directly contracting with a peer review organization. However, this time, if Medicaid contracted with such an organization, the federal government would match 75 percent of the costs; otherwise the match would remain at 50 percent. As one Medicaid staff put it, "OBRA twisted our arm." It was more cost-effective for Medicaid to contract with a PSRO for UR and to have all hospitals become nondelegated for Medicaid review. Medicaid implemented these UR functions in April 1982, contracting with eight PSROs across the state. The nondelegated review agreements included both physician and nurse non-delegation in addition to 100 percent admission review and a cyclic review for continued stay.[5] Hospitals in rural areas or with a low volume of Medicaid patients were deemed "focused-out" and the PSRO reviewed claims on a monthly or quarterly basis.

Initial PSRO performance is encouraging, as Exhibit 5.1 illustrates. The data represent UR statistics for April through December since nondelegated review was initiated in April of 1982. An increase in the identification of inappropriate admissions resulted, from 597 denials in 1982 to 835 denials in 1983. Similarly, contracting with PSROs substantially increased the number of continued-stay denials. Prior to the nondelegated

[5]There is no admission review on healthly maternity and newborns. There is no question as to the medical necessity of the admission. However, the quality of care is monitored.

Exhibit 5.1

Medicaid Utilization Review,
April-December, 1981-1983[a]

Admissions	96,885	87,766	85,444
Denials	193	597	835
Continued-stay denials	863	2071	2455
Carve-out days	NA	19,020	13,879
LOS	NA	6.07	5.85

Source: Division of Medical Assistance and Health Services, New Jersey Department of Human Services.

Note: NA = not available.

[a]April-December was selected by the Division because nondelegated review was initiated in April of 1982.

status, continued-stay denials totaled only 863; however, after contracting with PSROs for review, over 2,000 days after admission were denied. In addition, a high number of "carve-out" days, or those days not medically productive during the inpatient stay, have been identified. The Medicaid agency has projected a savings from utilization review of well over $2.5 million.[6]

However, Medicaid's "arm was twisted" again with the passage of TEFRA. If Medicaid contracted with the federally designated PRO, the UR costs would remain at the 75 percent match; otherwise a 50 percent match would be in effect, assuming Medicaid contracted with another review organization. Thus, as of October 1, 1984, the designated PRO has been conducting Medicaid review. However, many uncertainties remain. Medicare negotiated an entirely new UR package with the PRO and is now reviewing only a 50 percent sample of claims on a retrospective basis. The PRO has continued the concurrent 100 percent review for Medicaid, but the PRO and Medicaid are in the middle of negotiating a new UR package. The PRO is preparing cost estimates for a retrospective sample review and a concurrent 100 percent review. A decision is expected by June 1985.

5.3 Special Waivers and Grants

In addition to processing claims and resolving particular issues under the DRG system, the Medicaid agency operates a number of special projects intended to provide cost savings to the state. While these projects are not directly related to the all-payer DRG system, each has potential to

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[6]E. Weiland, New Jersey Division of Medical Assistance and Health Services, "The Impact of DRGs on Payors: A Medicaid Perspective," Diagnosis Related Groups: The Effect in New Jersey--The Potential for the Nation. Conference Proceedings, November 30 - December 2, 1983.

reduce inpatient hospital utilization. Each of these projects is described below:

- Medicare-Medicaid Alcoholism Demonstration Project: The Department of Health was granted a waiver to provide services at alcoholism treatment centers not previously covered by either Medicaid or Medicare. This program, approved by the federal govenment in October 1981, is being administered under contract by the Department of Health, and became operational a year later.

- Health Maintenance Organization Contract: Medicaid entered into the first contract with a health maintenance organization, Omnicare, the Cumberland Regional Health Plan in Vineland. Under the contract, Medicaid-eligible families are able to enroll for guaranteed six-month periods. Other contracts are planned.

- Medicaid Competition Demonstration Project: An application for a four-year, $1 million Medicaid Competition Demonstration Waiver Project was federally approved in 1982 and became operational on July 1, 1983. This project, called the "Medicaid Personal Physician Plan," allows Medicaid recipients to enroll in the plan with a physician case manager, who, in turn, is reimbursed on a per patient capitation rate basis instead of the traditional fee for service. This project is a major undertaking for Medicaid because of the complex elements involved, including marketing, enrollment, systems changes, and contracting, among others. As of March 1985, eight counties were under the program. The project will be operational in the remaining counties by July 1985.

- Home and Community Based Waiver Project: The federal government approved a Medicaid waiver in 1983 to equalize the income eligibility standard between community residents and patients in institutional facilities. The three-year waiver will permit up to 1,800 elderly and disabled individuals to remain at home and in the community by providing them with eight needed Medicaid services. The mentally retarded are covered by a separate federal Medicaid waiver, which has also been approved. The waiver for the elderly will make available an additional $21 million over the three-year period. The waiver program will be instrumental in addressing the long-standing Medicaid institutional bias by permitting individuals in the community to become Medicaid-eligible who previously would not have qualified. In addition to helping reduce Medicaid costs, it will permit individuals to remain in the community by providing them with essential Medicaid-reimbursed services. The waiver was granted under provisions of Section 2176 of the Omnibus Reconciliation Act of 1982.[7]

[7]State of New Jersey Department of Human Services, Division of Medical Assistance and Health Services, Fiscal Year 1983 Annual Report, pp. 2-3.

CHAPTER 6

HOSPITAL STRATEGIC BEHAVIOR

This chapter examines hospital behavior under New Jersey's DRG reimbursement system. Since New Jersey's hospital industry is the one most experienced with DRG payment, and the only one whose system applies DRG reimbursement across all payers, the experiences and behavior of New Jersey hospitals warrant special attention. New Jersey's all-payer DRG system, designed as a cost containment strategy to address problems experienced under SHARE, sought to protect hospital viability, to improve or refine management information, and to make provision for uncompensated care. The system's prospective rate-setting and per case payment methods provide incentives to improve efficiency through reduced length of stay and by controlling ancillary usage and improving unit efficiency.

The following sections examine the implementation process and the effects of New Jersey's rate-setting and DRG reimbursement on hospital organization; operations, management and staffing; financial status; and perceptions about patient care, quality, and access. Because Medicaid accounts for a small proportion of hospital revenue at most institutions, and because it participates as one of many payers in the New Jersey DRG system, Medicaid-specific effects on hospital behavior are presented within the context of DRG reimbursement changes in New Jersey.

Hospitals have responded to the new reimbursement system in a variety of ways. New Jersey hospitals have implemented prudent buyer arrangements, volume purchasing, and corporate restructuring typical of hospital cost containment efforts nationwide. Several strategic responses, however, can be related specifically to, or have been encouraged by, New

Jersey's DRG reimbursement system. Hospitals have been affected both by the DRG aspects of the system and by its all-payer nature.

Ten hospitals were selected for the study sample, representing facilities with high Medicaid volume and variations with respect to geographic location, teaching status, and affiliation. The hospitals visited were all nonprofit and represent different types of corporate and institutional arrangements. The sample includes hospitals under management contract; facilities included within multihospital arrangements; independent hospitals; and nonprofit institutions.[1] The generalizability of results based on only ten facilities is very limited. However, the findings do provide some qualitative insights into hospital organization, strategic behavior, preparations for and difficulties encountered during implementation, and operations and management under the New Jersey DRG system. These are discussed in the following sections.

6.1 Overview of New Jersey Hospital Performance, 1979 to 1983

A brief overview of trends in New Jersey hospital performance provides a useful context for assessing changes in hospital organization and strategic behavior during and following the implementation of the DRG system. American Hospital Association (AHA) data show that, for the years 1979 to 1983, total hospital expenses were increasing at a slower rate in New Jersey than for the nation as a whole. Likewise, total expenditure per admission had increased at a rate substantially below the national rate of

[1]See Chapter 1 for a comparison of sample hospitals to all hospitals in New Jersey.

growth.[2] Hospital revenues followed the same pattern as expenses, as shown in Exhibit 6.1.

During the same period, New Jersey admissions increased above the national average, as shown in Exhibit 6.2. While admissions increased three percent between 1979 and 1983 nationwide, New Jersey experienced a ten percent increase in admissions during the same period. Average length of stay (LOS), on the other hand, declined in the state from 8.7 to 8.0 patient days, while length of stay for the nation remained stable, at 7.6 days. Despite the declining length of stay, New Jersey's average LOS remained above the national norm. Finally, trends in visits to hospital outpatient departments (OPD) were strikingly different in New Jersey than in the nation as a whole. New Jersey hospitals reported an eight percent decrease in OPD visits, as compared to a six percent increase nationwide.

The above utilization and financial trends suggest that, between 1979 and 1983, New Jersey hospitals were responding to the incentives of the DRG system. The state was able to control the rate of unit cost growth, in part through material reductions in the length of stay. At the same time, however, New Jersey hospitals were also experiencing an increase in admissions. These trends will be reflected in the following observations drawn from our interviews in New Jersey hospitals.

6.2 Implementation of DRGs by Sample Hospitals

Implementation of the state's DRG system met limited resistance from the hospital industry once the program's legal mandate was established.

[2]However, changes in the New Jersey system apparently caused very different results for 1984. Chapter 7 presents a detailed discussion of changes in hospital costs and payer expenditures under the New Jersey DRG system.

Exhibit 6.1

Total Expense and Net Patient Revenue (in Thousands)
New Jersey Hospitals vs. U.S. Hospitals, 1979-1983

	1979	1983	% Change
Total Expense			
New Jersey	$ 1,961,604	$ 3,258,801	+66
United States	66,003,741	116,437,675	+76
Net Patient Revenue			
New Jersey	$ 1,842,275	$ 3,125,360	+70
United States	63,751,066	113,453,381	+78

Source: American Hospital Association, Hospital Statistics 1980 Edition for 1979 data; Hospital Statistics 1984 Edition for 1983 data.

Exhibit 6.2

Average Length of Stay, Admissions and Outpatient Visits (in Thousands)
New Jersey Hospitals vs. U.S. Hospitals, 1979-1983

	1979	1983	% Change
Average Length of Stay			
New Jersey	8.7	8.0	-8
United States	7.6	7.6	--
Admissions			
New Jersey	1,027,648	1,125,661	+ 10
United States	35,099,231	36,151,780	+ 3
OPD Visits			
New Jersey	6,329,350	5,820,537	- 8
United States	198,777,740	210,044,017	+ 6

Source: American Hospital Association, Hospital Statistics 1980 Edition for 1979 data; Hospital Statistics 1984 Edition for 1983 data.

Operational difficulties were expected to be minimal, perhaps because New Jersey hospital administrators were accustomed to operating under various reimbursement systems. Many New Jersey hospitals looked to the casemix-based program for welcome relief. Sample hospitals perceived the DRG system to be less stringent than SHARE, which established maximum rates and reconciled differences to actual cost below the established rate. Moreover, provisions for capital reimbursement under the DRG system were notably generous; New Jersey's reimbursement system included capital allowances more comprehensive than those of any other state in the nation. DRG rates included a working cash infusion, allowances for price-level depreciation on major movable equipment, bad debt and charity care, and provision for costs incurred by hospitals in implementing the new reimbursement program. The new system also provided an alternative to SHARE's retrospective rate review and appeals process, which had become a source of considerable frustration to the hospital industry.

Hospitals were phased into the system over a three-year period and were allowed to volunteer during the program's first year. Twenty-six hospitals implemented DRG reimbursement in 1980, followed by 42 hospitals in 1981. The remaining hospitals were phased in during 1982. SHARE reimbursement remained in effect for all hospitals until their DRG implementation.

In general, the willingness of hospitals to accept the DRG payment system varied, reflecting the differing interests of urban and rural facilities that had surfaced within the New Jersey Hospital Association during the development of the DRG system. NJHA, in fact, could not decisively advocate either adoption of or opposition to DRGs, since its own membership was divided.

Inner-city hospitals perceived the reimbursement program as beneficial. Many were eager to volunteer for the first phase-in, because of the system's provisions for uncompensated care and its favorable arrangements for capital reimbursement. The new DRG payment program promised to mitigate severe revenue shortfalls the hospitals had experienced under SHARE and previous systems. One inner-city hospital administrator described the working cash infusion as "the carrot that enticed [us] to volunteer." Over a two-year period this amounted to $1.5 million. On an even more basic level, urban hospitals in our sample reported, "We volunteered because we were broke."

Suburban hospitals in the sample remained more skeptical of the new reimbursement system and were more hesitant to volunteer. Unburdened by the problems of urban hospitals and claiming greater management efficiency, suburban facilities did not perceive as urgent a need for change from SHARE reimbursement. Many accepted the DRG payment program with resignation, as the latest attempt by the state to regulate hospital payment. Objections were directed at the state's mandated authority to force industry participation, rather than at DRG payment methods or rate-setting practices. A suburban hospital's administrator in our sample described his attitude toward the still experimental program as typical of suburban hospitals statewide: "Never be the first one--never volunteer unless you have to."

Despite this lack of consensus concerning implementation of the new regulations program, New Jersey hospitals overall experienced improved financial status almost immediately upon changing from SHARE to the DRG system. A recent study by the Health Research and Educational Trust of New Jersey (HRET) reports that Phase I hospitals received, on average, $2.3 million more than they would have under SHARE.[3] While the size of this effect may reflect the over-representation of financially pressured urban facilities

in the first cohort, the most dramatic changes in economic and financial status for all hospitals occurred between the first year preceding phase-in and the first year under DRG payment. HRET's findings, by hospital cohort, are displayed in Exhibit 6.3.

6.3 Administrative Perceptions

Hospital industry representatives generally perceived DRG rate-setting to be "reasonable"--a critical factor facilitating implementation of New Jersey's DRG program and the ease with which administrators accepted the new payment method. Most administrators in our sample viewed the new system as "fair and adequate" as a reimbursement method and as providing reasonably accurate classification of patients and resources by case type. Several respondents noted that DRGs were not developed explicitly for reimbursement purposes, and many expressed doubts about the system's cost containment potential. In only one case did administration strongly criticize the assumptions of DRG-based reimbursement, calling for "more appropriate linkages between cost and acuity."

Selection of the base year also found easy acceptance in the hospital industry. For Phase I hospitals, 1978 costs provided the basis for initial rates. These were updated using 1979 costs, when available, for subsequent years and for remaining hospitals. Regardless of the circumstances facing individual hospitals or the industry as a whole, administrators generally rationalized that the most currently available data had been used and that such data were the most appropriate for determining each hospital's financial requirements.

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[3] J. Joel May and Jeffrey Wasserman, "Selected Results from an Evaluation of the New Jersey Diagnosis-Related Group System, "Health Services Research, Vol. 19, No. 5, December 1984, pp. 547-559.

Exhibit 6.3

Percentage of Hospitals Having a Gain/Loss From Operations and a Net Profit/Loss

	1979	1980	1981	1982
1980 DRG Hospitals				
Gain from operations	46	79	96	67
Loss from operations	54	21	4	33
Net profit	54	83	100	88
Net loss	46	17	0	13
1981 DRG Hospitals				
Gain from operations	65	54	88	58
Loss from operations	35	46	12	42
Net profit	77	85	100	81
Net loss	23	15	0	19
1982 DRG Hospitals				
Gain from operations	52	52	39	52
Loss from operations	48	48	61	48
Net profit	78	70	70	70
Net loss	22	30	30	30

Source: J. Joel May and Jeffrey Wasserman, "Selected Results from an Evaluation of the New Jersey Diagnosis-Related Group System," Health Services Research, Vol. 19, No. 5, December 1984, pp. 547-559.

Several hospitals in our sample used the base year as a time to "clean house," taking advantage of opportunities to retire bad debt for the initial rate-setting. One administrator stated that he used "accounting logic" to declare over one million dollars in losses, including bad debts, unrecoverables, and a below-cost HMO contract. Until then a losing proposition, his institution ended its first DRG rate year with a $300,000 profit.

Not every hospital pursued so aggressive a strategy. We were told that "efficient" hospitals viewed these base year "accounting games" as unfairly, favoring hospitals that gamed the system and that had been poorly managed in the past. Challenging incentives for both cost containment and equity in the rate-setting process, an administrator at a suburban institution charged that "the state system was a complete farce, forgiving millions of dollars for inefficient and poorly managed hospitals. It wasn't fair to a hospital like ours, where we have been efficient all along."

Respondents at all hospitals stressed the importance of rebasing the DRG system frequently and regularly to account for changes in technology and health delivery practices. The majority of hospitals reported that rebasing of the DRG system in 1982 provided an opportunity to recognize improved technologies and new services such as pharmacy, prosthesis, and hyperalimentation.

Rebasing did not appear to affect all hospitals equitably, however. Suburban hospitals in particular were critical of the system's rebasing, complaining that "unfair advantages" were afforded urban facilities seeking to update or replace outmoded facilities and equipment, while expansion of new services considered essential by suburban institutions were restricted. One such hospital, which had experienced substantial growth in

services and revenues, reported considerable difficulties in attempting to establish its new rate structure. Most of these problems were encountered through the appeals process, which witnessed fights for individual items including housekeeping, interest, and depreciation in order to reach a settlement on rates.

Rebasing may also provide incentives for hospitals to increase their costs in order to receive higher revenues in subsequent rate years. One administrator in our sample voiced strong opposition to this strategy, which he reported to be a common practice among his peers. In his opinion the 1982 rebasing of New Jersey's DRG system, while necessary, occurred largely without review and provided adverse incentives to hospitals by "encouraging unnecessary spending." Some respondents voiced suspicions that hospitals "loaded" as many expenditures as possible into their 1982 cost reports because it was known that 1982 would be used for rebasing.

Concerns were also expressed that base year restrictions, combined with the incentives of per case payment methods, may encourage hospitals to restrict or discontinue unprofitable services and thus may result in increased patient transfer or reduced access to certain procedures. Respondents at several hospitals readily acknowledged the system's potential for such outcomes, although few reports documenting patient "dumping" were verified. In one case involving an independent facility, however, a neighboring hospital reported that patients had been routinely referred for treatment for services that, although they were available at the host hospital, had not yet been approved in that facility's rate structure. Patient transfers ceased after rebasing; however, careful monitoring of such practices, and of their implications for quality and access to care, are clearly warranted.

6.4 Transition to DRG Payment

Hospitals varied in the extent to which they prepared for implementation of DRG payment, but most claimed to have taken at least some steps to accommodate the implementation of the new reimbursement system. Pivotal changes occurred in the areas of data processing, medical records, and utilization review. Some hospitals undertook large-scale reorganizations involving staffing changes, the creation of DRG committees, departmental reorientation, and corporate restructuring. Others viewed DRGs as "just another layer of bureaucracy," claiming "DRGs haven't had much of an impact. The new machinery is just layered on top of the existing administrative structure."

Previous studies of DRG-related impacts on hospital organization provide similarly ambiguous findings concerning institutional responses to New Jersey's DRG payment program. In their study of hospital organizational impacts under DRG reimbursement, May and Wasserman of HRET identified five common responses to DRG implementation.[4] These include:

- expansion of the quantity and type of information collected by hospitals;
- increased decentralization of decisionmaking, particularly at the departmental level;
- importance of medical records departments relative to other departments;
- greater involvement of medical staff in management decisions (including increased sharing of physician and/or DRG-specific monitoring and profit/loss statements); and
- an increased focus by administration on product line management, by DRG.

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[4] Ibid.

Another study, conducted by Weiner, Greene, and Sapolsky under contract to the Robert Wood Johnson Foundation, challenges HRET findings.[5] Weiner et al. report that, while some changes have been initiated in response to DRG payment, these are few and relatively insignificant. Organizational pressure in hospitals and the politics of reimbursement far outweigh DRG as an impetus for change. They conclude that far too many exceptions have been built into the DRG concept for the system to have had a significant impact on industry behavior.

Although the significance of DRGs as an overall catalyst for change in New Jersey's hospital industry remains questionable, most investigators agree that there is a wide degree of variance and that some specific hospitals have initiated significant changes in response to DRG reimbursement. Among hospitals in our sample, institutional responses appear to reflect the extent to which administration perceived that the DRG system would affect their hospital, and the extent to which potential changes might address, or benefit, specific organizational concerns. A Phase I teaching hospital, for example, reported few changes, ostensibly because the DRG system appeared immediately to solve the facility's primary concern: uncompensated care. A respondent at another comparable institution told us, "In this hospital DRGs are just another financing mechanism. We haven't seen any decisionmaking around service or cost or DRGs." In both cases, however, medical records and utilization review reportedly received greater prominence within the hospitals' organizational structures.

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[5]Sanford L. Weiner, Richard Greene, and Harvey Sapolsky, "Sounding Board: The Theory and Practice of DRG Implementation," unpublished report, October 1984.

Approximately half of the hospitals in our sample claimed to have pursued more significant changes in anticipation of DRG reimbursement. A typical response was one describing a suburban hospital that initiated several organizational changes in preparation for phase-in. At this hospital, utilization review and medical records gained in importance and were placed under the fiscal department, a DRG coordinator position was created, and DRG support committees were created. Of the remaining hospitals, most adopted a "wait and see" attitude, implementing changes well after phase-in, when it appeared that DRGs were firmly established as the state's official reimbursement method.

6.4.1 Staff Preparation

Educating staff in preparation for DRG reimbursement appeared to be a priority only for hospitals that implemented significant DRG-related changes. However, most hospitals took steps to educate staff prior to phase-in, even if these were limited to occasional seminars or in-services for physicians and staff. A few hospitals undertook more widespread efforts, sharing and disseminating information to staff at all levels. The majority focused training sessions at departmental levels, however, especially in the areas of medical records and utilization review.

6.4.2 Data Systems

The majority of hospitals in our sample reported having had adequate data for the transition to DRG payment. Cost and casemix data necessary for implementation of the DRG system had been required of hospitals since 1975 and had been routinely submitted for rate review and appeal under SHARE. The quality of data used to set initial rates was mixed, however. Most hospitals

in our sample reported having had adequate data systems in place and were experienced in using data required by the DRG system for internal management as well as for state rate-setting purposes. Some, however, could supply only basic data and relied on manual procedures and record keeping for initial rate-setting. None of the sample hospitals reported that their data were inadequate, although alternative rate-setting procedures were available when necessary through the state.

Hospitals experienced with data systems prior to phase-in reported an easier transition to DRG payment than hospitals without such experience. At one large, inner-city teaching hospital we were told:

> I'm not sure our data are good enough now, so it certainly wasn't then. But we had volunteered to be part of that experiment that never got off the ground. I think that helped us to understand the system and get ready better than some other hospitals.

Roughly half of the hospitals in our sample commented that, while their data were adequate for DRG rate-setting, the state did not allow adequate time to establish data systems prior to phase-in. UBPS forms, which combined required cost and casemix data, were late, causing much difficulty and considerable cost to the hospital for programmer overtime and related technical assistance.

In all cases, administrators acknowledged the incentives of DRG reimbursement for increased, and improved, information flow. Most recognized the importance of the DRG system's incentives for internal management, facilitated by the availability of data, and many administrators endorsed the DRG system's data management orientation. One respondent described DRGs as "the best system yet . . . . [DRGs] force administrators to keep on top of what's going on--a great management tool." Another expressed similar enthusiasm but added that the system's data management capabilities "present

real problems with gaming. . . . They give hospitals a way to look at and deal with physician salaries, raises, and increments."

The importance of good data systems was identified by all respondents as key to DRG reimbursement. After several years' experience with DRG payment, New Jersey hospitals continue to implement and refine management information capabilities. Most sample hospitals reported using "canned" software in the early stages of the program. However, interest in customized data systems is growing as administrators become increasingly sophisticated in the management of DRG reimbursement. One respondent went so far as to attribute his predecessor's downfall to inadequate data and poor selection of systems. Consequently, he investigated 25 to 30 different systems operating in hospitals around the country before selecting the current system, which he considers "state of the art" and which "produces great information."

6.4.3 Communication with the State

Communication between hospitals and the state was crucial to the implementation and administration of New Jersey's DRG system. During the program's initial stages, hospitals reported being frustrated by "poor and late" communications by the state and viewed the state's role in the rate-setting process with extreme cynicism. Although relations with the state became more orderly over time, as hospitals and officials gained experience with the DRG system, most administrators in our sample expressed ongoing concern that New Jersey's system was "plagued by constant changes." The system's frequent retroactive rate adjustments in the early years were said to

mute the intention of the system, making prospective budgeting virtually impossible. Hospitals still complain that rates are not finalized until three or four months after the start of the rate year.

Several respondents claimed that the system, in recent years, has become increasingly bureaucratic. Many commented that staff turnover at DOH is a source of continuing frustration. One respondent told us:

> When we started, the state people were practical and understood the issues. But those people have left and the people here don't really understand the realities of how things work. They just aren't the same caliber--the people who could went somewhere else.

Another stated:

> DOH has lost a lot of good people. They were open-minded and not bureaucratic--you know, they weren't experts on what you couldn't do. They've been replaced by bureaucrats.

The expertise of DOH staff, nevertheless, remains in demand at New Jersey hospitals, many of which actively sought state analysts and other staff familiar with the reimbursement system to fill positions at their institutions. One hospital in our sample hired two former DOH staff members for key positions related to DRG operations: DOH rate analyst currently serves as Budget Director, and a DOH quality assurance staff member now serves as DRG Coordinator. While we did not encounter other former DOH staff during the interview process, both state officials and hospital industry representatives informed us that such hiring practices were routine.

6.4.4 Intermediary

Selection of program intermediaries is a critical factor to ongoing operation of the DRG program. The intermediary functions as a "go-between" for the processing of hospital billing and provides information necessary for rate-setting and appeals. New Jersey's DRG system uses two intermediaries:

Blue Cross and Prudential. Both organizations have maintained historical relationships with hospitals in the state under Medicare.

Of the hospitals in our sample, half used Prudential and the other half used Blue Cross. (Statewide, Prudential is used by 31 hospitals; Blue Cross provides intermediary services to 66 hospitals.) Among Prudential hospitals in our sample, billing issues generated heated controversy. Complaints about Prudential's error rates were common, and criticism of their performance was frequently reported by hospital representatives. Many hospitals reported "continuous foul-ups" during the DRG program's first one and one-half to two years. Although this situation has improved significantly, complaints were still expressed about Prudential's inability to report accurately to DOH the numbers of discharges and total inlier/outlier charges for hospitals' final reconciliation. In some cases, hospitals reported delays in excess of six to seven months before Prudential could reconcile discrepancies. Clearly, intermediary performance should be fully considered by states implementing similar reimbursement programs.

6.4.5 Hospital Staffing

Few hospitals reported staff reductions or layoffs, although one institution in our sample reported a nursing layoff as part of an eight percent across-the-board staffing cut. This resulted in a reduction in FTEs per occupied bed from 3.2 under SHARE to 2.4 under the DRG system. At another hospital, the utilization review coordinator remarked that, while there appear to be more RNs under DRGs than under SHARE, these nurses are working heavier loads.

Most institutions reported that absolute numbers of staff have not decreased, but there is some indication among sample hospitals that low-level,

unskilled workers are being replaced by skilled staff, shifting the overall composition of hospital staff. One CEO remarked that, although layoffs have not occurred, he has hired a greater number of "accountant types, rather than clerks," in response to the DRG program. Sample hospitals commented that more attention is given to granting overtime, and several reported that they now use more on-call staff, volunteers, students, and working managers. At one suburban hospital we were told that students and volunteers are used to deliver lab slips, X-rays, taxi patients, and even to help in preparing reports and pharmacy billing.

Sample hospitals reported a variety of changes in DRG-related staff positions and functions at many levels of the hospital hierarchy, including upper levels of administration and management. CEOs with strong administrative and accounting backgrounds have been actively recruited by New Jersey hospitals, while fiscal management responsibilities have reportedly increased for incumbent administrators under DRG payment. Some hospitals reported a greater use of consultants and accountants. However, one hospital reported that, since no appreciable results had been demonstrated, consultant positions were eliminated as a cost-saving measure and were replaced by competent staff, either hired from outside or trained in-house.

Some low-level clerical positions, including medical records coding and billing, have been elevated to positions of considerable importance under DRGs. Typically, hospitals in our sample noted increased attention to medical records functions, which, according to one respondent, "moved from the basement to the executive suite." However, many hospitals reportedly encountered personnel difficulties in these departments during the transition and in the early stages of the DRG program. At most hospitals medical records departments had been staffed by low-paid, semiskilled clerical staff, and for

many the change to the DRG billing system was confusing and disruptive. A billing supervisor at one institution observed the following staff responses:

> My girls have been billing for 15 or 20 years and now they have to learn a new way to do it. They see the new, young girls working on the computers and are highly critical of their work, eager to point out errors and such. I have to explain that this isn't all they do.

At this hospital, the major operational change with DRGs was a shift from manual to computerized procedures, related conversion adjustments, and the switch from billing by payer group to an alphabetized system. Similar reactions were noted at other sample hospitals and by intermediary provider relations educators.

Hospitals also reported problems in recruiting coders to prepare patient abstracts for DRG assignment. Existing staff can often be trained in new billing procedures and methods, but medical records coders must be well trained in the areas of medical terminology and the physiology of diseases. With the onset of DRGs, we were told, "all the good coders and medical records technicians were swallowed up."

Among the new positions created in response to DRG payment is that of the DRG coordinator. Eight of the ten hospitals in our sample have established this position, to oversee and provide guidance to DRG operations. One respondent aptly described her position as that of "watchdog of the system--like conducting an orchestra." The DRG coordinator at another hospital explained that her responsibilities include managing all DRG, utilization review, and medical records functions. This involves using MIS data to monitor physician practice patterns, speaking informally with physicians about their performance relative to their peers, handling medical

records review, and coordinating inservices for physicians and staff. Similar responsibilities were reported by DRG coordinators at other hospitals in our sample.

A variety of individuals with varying job descriptions filled the role of DRG coordinator at sample hospitals. Approximately half of the hospitals reported that a nurse, long experienced with the hospital's practices and well respected by staff physicians, served in this position. At two hospitals, medical records technicians filled the role.

Taking a very different approach to the position and its related responsibilities, one hospital in our sample recently hired a half-time physician as DRG coordinator. The physician has focused considerable effort on the ordering and use of pharmaceuticals, including education sessions for physicians on the use of antibiotics. The hospital feels that many expensive, third-generation antibiotics are used when less powerful and less costly alternatives are available. Considerable savings have been realized as a result of these efforts. The hospital feels that the use of a physician in the role of DRG coordinator is more effective than using other professional or paraprofessional staff because of "greater peer respect." The hospital plans to continue its focus on pharmaceuticals, appropriate use of procedures and techniques, and other "prudent buyer" approaches.

6.4.6 Winners and Losers

Consistent with the DRG system's focus on product line management, most hospitals could readily identify the top 10 or 25 DRG "winners" and "losers," and many have taken steps to bring costs of "losing DRGs" into line. Vaginal delivery and newborns, as well as Caesarian section, were frequently cited as lucrative DRGs. Emphysema, often requiring long length of

stay, and COPD (Chronic Obstructive Pulmonary Disease), which shows considerable variation in resource consumption across patients, were frequently cited losers. Whether hospitals are influencing changes in physician practice patterns and medical records reporting or merely discouraging high-cost admissions is unclear.

In addition to selected diagnoses and procedures, certain methods or styles of practice have been identified as "winners" under New Jersey's DRG system. A DRG coordinator at a suburban hospital in South Jersey explained:

> It didn't take long for all the New Jersey hospitals to realize that cataracts are a real winner in this system. It is more favorable under DRG reimbursement to perform one eye at a time, rather than to remove two at once, as most doctors had been doing. We explained this to the doctors, and asked them to do it our way, and they have been happy to comply.

The structure of psychiatric DRGs is felt by respondents in the study to be inadequate, especially for psychoses. The current reimbursement structure is considered to favor psychiatric treatment at free-standing facilities but to present particular problems for hospitals under the DRG system. DRG payments are received on the basis of the psychiatric DRG rate, although patients frequently receive care for other medical conditions identified during the hospital stay. At one hospital in our sample, physicians have been actively encouraged to treat only the admission diagnosis or to admit patients in accordance with the medical conditions to be treated. Extreme variability in length of stay also poses problems under DRGs for the hospital providing psychiatric care on an inpatient basis.

6.5 Physicians

Physicians played a relatively minor role in the development of New Jersey's DRG system, and many in our sample were apprehensive and uncertain

about changes anticipated under DRG reimbursement. Most did not understand DRG concepts and feared that patient care would be adversely affected. At one hospital the Director of Medical Affairs likened physicians' initial reactions to DRGs to the Elizabeth Kubler-Ross response stages to death: "fear, denial, anger and, finally, acceptance."

One of the most significant changes occurring with the DRG payment program involves relationships between hospital administration and both staff and attending physicians. The product line orientation of DRGs has focused considerable attention on physicians' responsibility for patient care management. Promotion of this management approach appears to be most successful when endorsed, or administered, by the Medical Chief of Staff in close cooperation with hospital administrators.

At one urban teaching hospital in our sample, the Medical Division chief in fact commented that physicians are developing a new consciousness regarding hospital problems. "We have new responsibilities--particularly in the area of patient management. We can no longer be cavalier." He attributes much of this new attitude to hospital efforts to educate, and to the general literature. Another told us:

> Docs see what is going on. They also see you can't run away from this. We're not telling them how to practice, but we are telling them they've got to be aware and they are responding fairly well. But without rate-setting, they would budget over the top.

On balance, however, most of the Medical Directors in our study were less than enthusiastic about DRGs. Many claimed little knowledge or understanding of the relationship between specific DRGs and costs or charges, stating that their responsibility was to ensure the delivery of quality medical care. The Medical Director at an inner-city hospital was especially critical of the new reimbursement system, stating that both the system's rate-setting methods and

its incentives for reduced length of stay posed problems for urban institutions, which face greater acuity of illness and hence require greater resource consumption for individual patients. A shortage of nursing home and community placements after discharge often forced longer patient stays. These difficulties have been exacerbated under DRGs. He challenged, "Have art and compassion been removed from medical care?"

6.5.1 Monitoring Physician Practice Patterns

All sample hospitals appeared to recognize the importance of monitoring physician practice patterns and reporting, which can significantly affect a hospital's ability to maximize revenues under DRGs. These efforts were facilitated by the DRG system's "product line" orientation and subsequent improvements in management information required for DRG reimbursement. Every hospital in our sample noted increased administrative control over physicians and reported active monitoring of physicians' practice. At one urban teaching center we were told:

> Even with our long history of UR, the DRGs gave us a lot of data. You know, it's not that it wasn't data we couldn't have had before, but it's stuff we just never did.

Hospitals, as they become more experienced with DRG control systems, are becoming increasingly sophisticated in their ability to provide data on physician practice. Most were able to produce physician profiles by length of stay and charges for particular DRGs. At the more sophisticated hospitals, analyses of physician practice patterns were more comprehensive. Several hospitals demonstrated the ability to identify, and to predict, below or above average DRG charges for physicians by medical school attended and by age cohort, based on profiled patterns of treatment and intensity. The DRG coordinator at one hospital in our sample, in fact, remarked, "You can always

tell which physicians were trained at a particular medical school by their high outlier and ancillary patterns."

Most hospitals rely on peer pressure and informal review to draw practice patterns into line or assign this responsibility to the DRG coordinator. There are some indications that this approach may be an effective one. As one respondent commented:

> I think the big change is that the doctors know they are being watched. We review doctors--and a number are under special review--and some of these change and some practice somewhere else now. It's strange, but some of those who stayed now have better numbers than the rest of us.

Physicians are generally informed of their practice patterns relative to the norm, but at most sample hospitals no formal reprimands have been made of "outlier outlaws." Many physicians appeared eager to have available standards against which to compare their own practice patterns. However, some are still skeptical of DRG reimbursement and question whether diagnosis and cost should be linked. Others remain unconvinced of the system's clinical validity.

Several hospitals noted distinct differences in physician practice patterns, medical terminology, and documentation procedures across physician age cohorts. Management information showed that younger physicians tend to have lower length of stay and ancillary charges per case, while physicians between the ages of 40 and 50 years retain patients longest and use significantly more resources in treatment. Older physicians show patterns of practice similar to those of the youngest group (i.e., low-charge DRGs and less resource intensity). Respondents suggested that medical training, patient casemix differences, and clinical recording may account for these variations.

Many hospitals are using such information to educate physicians as well as to target cost containment efforts. The DRG coordinator at one hospital discovered that physicians in middle and older age tend to describe clinical diagnoses and treatment procedures with different terms than do younger doctors, and therefore has made efforts to update and to standardize the use of medical terminology. Because the same condition may often be considered under two or more DRGs, she is also attempting to "retrain" doctors to use the most lucrative classification and to pay strict attention to documentation of primary and secondary diagnoses. The efforts appear to be working. The hospital is clearly becoming more efficient in defining discharges within profitable DRG rates, as indicated by monthly management information reported over time. The DRG coordinator also believes that "socialized medicine will be established within ten years" and that "physicians will be reimbursed by DRG in the not too distant future." She is using this belief as a strategy for "retraining" physicians, explaining that, should they be reimbursed at a percentage of the DRG rate, "it is clearly in their interest to assign a $6,000 DRG rather than a $4,000 DRG, when clinically indicated."

Other physician practice responses to DRG reimbursement include careful admitting procedures and, after admission, review of length of stay. Many hospitals reported that preadmission screening was done whenever possible. Since ancillaries are already included in the DRG rate, hospitals with preadmission testing may be paid twice--once under the ambulatory system and once as part of the DRG in which it was formerly included.

Patients, or other payers, generally absorb these costs. However, as payers recognize the payment implications of "unbundling practices," benefit coverage is becoming more restrictive, returning the expense of such

practices to patients. At one institution, in fact, the Medical Director reported that his hospital encouraged service unbundling as a cost containment strategy. This respondent also noted that increased burdens on patients, and consumer inability and unwillingness to pay increased costs for unbundled services, may soon curtail this approach.

6.5.2 Hospital Board Activity

Reflecting general trends for more businesslike approaches to hospital administration nationwide, boards of trustees at New Jersey hospitals have become more sophisticated and are taking on a more businesslike tenor. Several hospitals referred to board-building activities and training sessions in hospital operations, management and finance in response to concern about cost containment, and an increased emphasis on product line management under DRG reimbursement. In some cases, deliberate efforts have been made to recruit members of the business and banking communities to hospital boards. Recognizing the importance of maintaining control over physician practice patterns, one hospital reported specifically increasing board membership above numbers of medical staff to override/veto physician influence in hospital decisionmaking.

6.6 Corporate Restructuring

Corporate organization and restructuring among sample hospitals appears to reflect changes evolving across hospitals nationwide but also reflects new forms of competition evolving within the highly regulated environment of New Jersey's hospital industry. New forms of corporate organization typically include multiple-hospital arrangements, vertically integrated expansion and spin-off foundations independent of the DRG system's

regulatory umbrella. A typical response was reported by an independent hospital that has established a foundation with its own governing board in response to New Jersey's DRG rate-setting program. Subsidiaries of the foundation include an extended care facility, an ambulance service, and a proprietary nursing service that supplies the needs of the hospital as well as those of neighboring hospitals and private patients. Each subsidiary has its own board. Another sample hospital reported four nonprofit and one for-profit corporation, including a Nurse Registry, a Lifeline program, and Durable Medical Equipment and home health care programs in response to New Jersey's reimbursement system. Several hospitals in our sample reported spinning off surgi-centers and ambulatory care services outside the hospital, and others have joined regional or multigroup networks.

The creation of foundations and new services incorporates two related dimensions: vertically integrated services and wellness-oriented care. Many of these are community outreach programs that the hospital markets to local employer groups and community organizations. Programs such as Life-line, Motherhood-Over-Thirty Programs, Cardiac Rehabilitation, and other wellness programs are being developed statewide.

Not all restructuring can be attributed to DRG reimbursement. Several hospitals indicated that restructuring had occurred as a means of maximizing revenue under New Jersey's regulatory system, or as a general cost containment strategy, but that these changes were not linked solely to DRG per case payment. An inner-city hospital reported that it has consciously encouraged HMO participation and group purchasing arrangements, but these efforts were initiated in the late 1970s and are not necessarily related to DRGs. However, this hospital is also currently building a surgical suite and is considering ICF, SNF, and DME services.

The DRG system's incentives for hospitals to discharge patients early have encouraged vertical integration into the areas of long-term care, home health care, and other cost-reimbursed services not yet subject to regulation but still enabling the hospital to maintain control over patient care. Multi-hospital groups are also afforded special advantages under New Jersey's reimbursement system. Hospital groups can centralize information systems, achieve efficiencies in purchasing of supplies, and allow specialization, or "patient care management," at the hospital level. Finally, foundations afford greater flexibility and autonomy apart from New Jersey's regulatory system. Such diversity in organizational structure has developed that state CN officials report that they are confronting "new legal entities" for which there is no organizational definition and hence no means for regulation.

6.6.1 Facilities and Services

New Jersey hospitals continue to make available sophisticated technology and services while expanding development of primary and preventive care services. Compared with national averages, a greater percentage of hospitals in New Jersey report programs for hospice care and for hospital-based psychiatric services, including emergency psychiatric services, outpatient services, partial hospitalization, foster/home care, and psychiatric consultation and education. New Jersey hospitals are below national averages for hospitals reporting emergency rooms, but, of all states nationwide, New Jersey reports the highest percentage of hospitals with organized outpatient departments and the second highest percentage of hospitals with rehabilitation outpatient services.[6]

New Jersey ranks first and second, respectively, among all states in the percentage of hospitals reporting high technology diagnostic and therapeutic radioisotope services, and radioactive implants. At the same time, New Jersey ranks third in the nation for hospitals reporting health promotion programs and is second in rank among states with hospitals reporting volunteer services and patient representation services. Whether these relative comparisons, based on AHA survey data from 1983, indicate adequate or excess supply of hospital-based services and adequate or inadequate supply of free-standing alternatives, and whether the hospital is the most "appropriate" or cost-effective setting for such services, is unclear. However, these patterns do indicate that New Jersey's reimbursement system, despite the state's long history of regulation, has not curtailed hospital industry development relative to national norms and has, in fact, encouraged unique structures for hospital-based services and delivery.

6.6.2 Capital

An important aspect of prospective payment programs is the ability of hospitals to replace or update capital equipment and facilities. Many New Jersey hospitals faced a need to replace older capital buildings and equipment concomitant with implementation of the DRG program. In fact, nearly every hospital in our sample had initiated some sort of capital building program since DRG implementation. Under the stringent SHARE budget review program, few had pursued building or expansion during the 1970s. The new reimbursement program, however, includes several liberalizing provisions, such as the capital facilities allowance, a working cash infusion, and price-level

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[6]American Hospital Association, Hospital Statistics 1984 Edition; Data from the AHA 1983 Annual Survey, 1984.

depreciation applied to moveable equipment, which address these capital concerns.

6.6.3 Bonding

New Jersey's hospital industry has also experienced changes in patterns of capital financing not unrelated to the specific provisions for capital and equipment of its DRG system.[7] With the increased financial stability under the current reimbursement system, hospitals are better able to secure tax-exempt revenue bonds, the single largest source of current debt financing used by hospitals. Sample hospitals reported that, industry-wide, hospitals' bonding position has improved, especially in inner-city areas, with the DRG system's provisions for hospitals to retire bad debt.

6.7 Medicaid Patient Impacts

Most hospitals believe that, despite incentives to contain hospital costs, patient care has not been adversely affected under DRG reimbursement. UR and medical staff respondents, while they noted that clinical practices were changing, could not identify patient care impacts and remarked that clinical practice is carefully monitored under utilization review--internally, and by PRO/PSRO groups. At only one hospital did we encounter administrative directives for differential treatment of Medicaid patients. In this case Medicaid policies regarding "add-on" services were identified as a potential obstacle to recipient access to inpatient hospital care, due to low and restricted reimbursement levels and service exclusions. Medical staff at this suburban facility have been informed that, if physicians provide services that are uncovered for Medicaid patients, they will be expected to pay from their

[7] See Chapter 4 for detailed discussion of hospital bonding and access to capital.

own pockets. This response was atypical, however. Most hospitals reported that Medicaid patients were being treated no differently than other patients under DRG payment. There are some indications that the all-payer aspect of New Jersey's DRG program has maintained access and, in some cases, has improved access to inpatient hospital services for the state's Medicaid recipients. One hospital reported that "bounty hunters" have been employed to increase Medicaid patient volume, as a means of increasing the hospital's market share.

Urban hospitals have experienced increased revenue for Medicaid recipients under the DRG system, but they face other problems unique to the low-income populations they serve. Inner-city hospital respondents stressed the need for more appropriate DRG staging to take account of higher casemix severity at their institutions, and they cited a lack of adequate support services and placements in nursing homes and home health care and community service agencies. One interviewee stated that DRG incentives for reduced length of stay exacerbated problems with patient placement at urban facilities, since many of their patient care problems were social in origin. Some felt that the state was not "pulling its weight" by providing alternative services or addressing the need for longer hospital stays.

6.7.1 Uncompensated Care

Most respondents also agreed that access for medically indigent patients has improved dramatically, due to the uncompensated care component included in DRG rates under New Jersey's all-payer system. An inner-city hospital CFO remarked: "We are a hospital of last resort for the indigent. Others have exercised some responsibility and it has been easier for them with the DRGs providing some measure of solvency." Provision for uncompensated

care is not generic to DRG reimbursement, but New Jersey's inclusion of uncompensated care as a reimbursable cost, shared by all payers, is a critical determinant of equity and of assured access to uninsured patients under current regulatory policy. While inclusion of the uncompensated care component has generated considerable controversy at the federal level, with particular concern regarding Medicare's responsibility for assuming these costs, New Jersey hospitals and state officials remain firmly committed to and convinced of the importance--and the efficacy--of this financing mechanism.

CHAPTER 7

PAYER IMPACTS

Now that we have examined the DRG implementation process and the system's organizational impact on the state, the Medicaid agency, and hospitals, we turn to the impact of the New Jersey DRG system on payers. The general question considered in this chapter is whether or not the system has created savings for the payers. As will be seen from the available secondary data, there are no unambiguous answers. More specifically, this chapter addresses:

- the issues surrounding the renewal of the Medicare waiver,
- the impact of the system on Medicaid expenditures,
- the impact on nongovernment payer expenditures,
- the impact on total hospital system expenditures, and
- the impact on alternative health plans.

Before addressing these issues, however, it is useful to reconsider the policy goals of the New Jersey system. These goals provide an important context for analyzing payer impacts.

7.1 Cost Containment in New Jersey

As will be recalled from earlier chapters, the DRG system was preceded by SHARE, a budget review system that directly regulated only Medicaid and Blue Cross. The SHARE arrangement was satisfactory to both payers. Medicaid supported SHARE because its costs were below what it would

have experienced if it were operating under a retrospective, cost-based system like those in most other states. Blue Cross supported SHARE because of the cost savings effect, but also because SHARE afforded Blue Cross a large competitive advantage over charge-paying insurors. By 1979, this differential was estimated to be between 25 and 30 percent. Because of the large market share of Blue Cross and Medicaid combined, the SHARE system created sufficient pressure on hospital revenue that the rate of growth in total hospital costs slowed under the SHARE system.[1]

The drawback to SHARE, however, was that its impact was felt differentially, by both hospitals and payers. Inner-city hospitals in particular were threatened because they did not have a sufficient number of charge-paying payers to whom uncompensated care costs--which were not covered by SHARE--could be shifted. Thus, the designers of the DRG system wanted to devise a method that would continue the overall cost-savings approaches of the SHARE system but also protect those hospitals with disportionate shares of uncompensated care. Equity among hospitals therefore became a major design element of the DRG system. Equally important, the designers of the DRG system realized that the equity issue was useful in generating political support for the new system.

Theoretically, this emphasis on equity was counterbalanced by pressure for cost containment: it was postulated that government payers and Blue Cross could pay a larger <u>proportion</u> of the total financial requirements of hospitals without paying a greater <u>absolute</u> amount than would otherwise have been the case. This paradoxical result could be obtained because under

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[1]C. Coelen et al. <u>Effects of Prospective Reimbursement Programs on Hospitala Revenues, Expense, and Financial Status.</u> Draft. Cambridge, MA: Abt Associates, May 1985.

the DRG system hospital rates would continue to grow at a slower rate than the national average and, over time, the slower growth rate would at least offset the additional share allocated to government payers and Blue Cross, and possibly yield a net savings.

Whether or not reductions in the rate of growth in hospital costs have been sufficiently large to offset the costs to government payers of various factors, among them increased coverage of uncompensated care, is not yet known. In part, such a determination depends on whether the basis of comparison is what could be achieved under SHARE or what would have happened in the absence of any system at all. It is also critical to remember that the system could result in a net savings to payers in the aggregate at the expense of some individual payers. This latter point brings into sharp focus the problems of evaluating an all-payer system solely in reference to the costs to any single payer. More generally, it illustrates the problem of aligning state policy goals with the narrower concerns of any single payer, particularly the federal government. While state govenment may be interested in the impact of a particular system on all aspects of the state's hospital delivery system, the federal government may be soley interested in reducing its own costs.

The importance of equity in the New Jersey system, and the tension between individual payer savings versus total system control, both influence many aspects of the system's impact on payers.

7.2 Medicare Impact

New Jersey's original demonstration waiver, granted in 1979 and covering the years from 1980 to 1982[2] agreed that Medicare should spend no more than it would have otherwise spent. When this waiver expired at the end of 1983, the New Jersey Department of Health (DOH) sought to have the waiver renewed, citing language first in TEFRA and reinforced by the Social Security Amendments that created the federal DRG system. The language allowed those states that already had waivers for all-payer systems to receive special treatment:

> The Secretary shall judge the effectiveness of such system on the basis of its rate of increase or inflation in inpatient hospital payments for individuals under this subchapter, as compared to the national rate of increase or inflation for such payments, with the State retaining the option to have the test applied on the basis of the aggregate payment or payments per inpatient admission or discharge during the three cost reporting periods beginning on or after October 1, 1983.[3]

Ensuing from DOH's request for a waiver extension was a protracted process wherein HCFA requested DOH to provide additional documentation of savings to Medicare. After almost a year of negotiations, New Jersey was granted a waiver, in early 1985. This section outlines the major issues involved in addressing three key questions of concern to Medicare:

- Did New Jersey meet the limit expressed in the waiver governing the period 1980 to 1983?
- What happened in the 1984 rate year, when the entire rate structure was recalculated on a new data base?
- What are the likely impacts from 1985 to 1987?

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[2]As a technical detail, the waiver was first granted for two years but was extended to three years almost as soon as DRGs became operational.

[3]42 CFR§1395 ww.(d).

7.2.1 Medicare Waiver, 1980 to 1983

The original Medicare waiver included a methodology for calculating a limit on Medicare spending under the waiver. This calculation was purported to estimate what Medicare would have spent in the absence of the waiver; as will be seen, HCFA has subsequently disputed this characterization. In May 1984, DOH reported to HCFA that the application of the methodology outlined in the waiver demonstrated Medicare savings under the DRG system of $229 million between 1980 and 1983. Exhibit 7.1 displays the savings claims of DOH. As of March 1985, HCFA was still evaluating these savings claims. Although a number of data problems have prevented a definitive conclusion, HCFA tentatively believes that the New Jersey savings shown in Exhibit 7.1 are overstated, but that expenditures between 1980 and 1983 are under the limitation expressed in the waiver methodology.

Generally speaking, the expenditure limitation (or, more simply, "the cap") is based on Medicare costs of each hospital in the year before it came onto the system and makes allowance in each year for:

- market basket inflation plus two percent,
- changes in volume and casemix, and
- new programs.

Adjusted costs for each hospital are then summed to determine the cap total.

HCFA believes the application of this cap calculation by New Jersey overestimates what Medicare would have spent in New Jersey if it had been reimbursing in New Jersey as in nonwaiver states. HCFA's main concern--at least for the period between 1980 and 1983--is that the manner in which New Jersey has operationalized the "new programs" adjustment is far too generous. The adjustment was originally designed to take into consideration

Exhibit 7.1

Medicare Savings Against Medicare Cap, as Calculated by New Jersey DOH, 1980-1983

Year	Amount
1980	$ 28,598,754
1981	22,924,607
1982	95,050,005
1983	85,451,664
TOTAL	$229,024,030

Source: Letter from Richard Goldstein, New Jersey Commissioner of Health, to Carolyne Davis, Administrator of Health Care Financing Administration, May 24, 1984.

Certificate of Need projects and other significant changes in the mix of services offered to New Jersey Medicare patients. HCFA believes that in calcuating the cap New Jersey may have included virtually all amounts granted on appeal as "new programs," when in fact only some portion of the appeals were granted for reasons consistent with the new program provision.

7.2.2 1984 Medicare Impacts

New Jersey's waiver initially expired on December 31, 1983. However, HCFA extended the initial waiver until December 31, 1984 because of ongoing discussions concerning whether and under what circumstances the waiver would be renewed. As a consequence, compliance for the entire five years from 1980 to 1984 will be measured under the cap methodology, as discussed above. HCFA now believes that if there are problems with compliance under the waiver cap, they will stem from the 1984 experience rather than from the first four years.

HCFA's concern with the 1984 experience reflects the large impact of "rebasing" in 1984. As reported in earlier chapters, the DRG rates in effect between 1981 and 1983 were developed from a 1979 base year, which was rolled forward each year for inflation and adjusted for certain hospital-specific factors. The designers of the DRG system believed that, over time, hospitals would respond to the incentives in the system by reducing costs below current standards. Thus, it was believed that periodic rebasing of rates would ratchet down rates, because the new rates would be founded on a reduced cost base. Consequently, the rules specified that the system would be rebased using 1982 costs.

When this calculation was carried out, however, the results were not lower rates but a major increase in rates over and above inflation. While the

exact amount of the increase will not be settled until after 1984 expenditures are completely analyzed, a letter from Thomas Kean, Governor of New Jersey, to HCFA summarized the 1984 increases as follows:

> Recent analysis conducted by Medicare's fiscal intermediaries and our Department of Health puts this increase at 12.44 percent. Of this, 6.5 percent is attributable to inflation. The remainder, or 5.94 percent, is the result of "rebasing"--updating our rates from a 1979 base to a 1982.

Governor Kean further argued that the 5.94 percent rebasing increase between 1979 and 1982 is less than Medicare would have paid for increases in costs due to changes in hospital technology over those three years had Medicare been paying on its reasonable cost basis.[4]

In terms of 1984 costs, the 12.44 percent includes changes in market basket and changes in medical technology; it does not include volume changes or changes in casemix. Medicare actuaries predicted 1984 Medicare Part A national increases of about 9.3 percent, excluding volume changes but including changes in casemix. (Because of the way the actuaries present their estimates, it is not possible to determine the unique contribution of casemix changes.) Thus, barring decreases in Medicare admissions or casemix, New Jersey's rate of increase was at least three percent greater than the anticipated national average, and it could have been much greater.[5]

The large increase in 1984 rates notwithstanding, HCFA believes New Jersey may have saved enough--relative to the cap methodology--during the first four years that the terms of the waiver will be met. However, even apart from the definitional problems of "new program" expenditures, HCFA

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[4]Letter to Dr. Carolyne Davis, Administrator of Health Care Financing Administration from New Jersery Governor Thomas Kean, November 29, 1984.

[5]"1983 Annual Report of the Board of Trustees of the Federal Hospital Insurance Trust Fund," HCFA, p.65.

believes that the cap methodology overstates what would otherwise have been spent, because the cap was designed to mirror national trends prior to PPS. By 1984, however, PPS was exerting an independent reduction in the rate of hospital growth that was not built into the original cap calculation. Additionally, if there had been any waiver and New Jersey had stayed under SHARE, Medicare would probably have had a lower rate of growth than the national average even before PPS.

7.2.3 Projected Waiver Impacts, 1985 to 1987

Following the 1983 Social Security Amendments, HCFA indicated that, in order for the waiver to be renewed, New Jersey had to demonstrate that expenditures under the waiver would be less than would be the case if Medicare reimbursed under its Prospective Payment System (PPS). In May of 1984, New Jersey indicated that its system would result in a savings to Medicare over the three-year waiver period of $98 million dollars. HCFA challenged New Jersey's methodology on several points, and over the next six months this estimate underwent many revisions, based on a number of technical issues. At the end of the process, HCFA and New Jersey agreed on a methodology that projected an inpatient Medicare savings from participation in the New Jersey waiver of between $231 and $265 million, and a waiver was granted for inpatient expenditures.[6]

Exhibit 7.2 shows HCFA's calculations, which result in the lower savings estimate of $231 million. Note that the estimated savings are realized largely in the third year. The reason for this pattern is that New Jersey Medicare per admission rates are lower than the national average but

[6]New Jersey also applied for an outpatient waiver, but this was not granted at that time and, as of April, 1985, was still pending.

Exhibit 7.2

HCFA Comparison of Projected Medicare Expenditures Under PPS and New Jersey Waiver, 1985-1987 ($000s)

	PPS	Waiver	Difference
1985	$1,349,995	$1,367,407	$ (17,412)
1986	2,509,268	1,440,033	69,234
1987	1,694,991	1,515,966	179,025
	$4,554,254	$4,323,407	$ 230,847

Source: Response to HCFA Review of New Jersey's Waiver Application, December 10, 1984. New Jersey estimates of total savings are slightly higher.

higher than the regional average, which is dominated by New York. Under the current PPS blended rates, New Jersey has negative savings; as PPS moves to the national rates, New Jersey realizes the effect of its lower than national rates.

Although HCFA and New Jersey agreed on projection methodologies, HCFA does not expect savings of the estimated magnitude. HCFA's position is that New Jersey has reasonably demonstrated that only if events unfold in the state exactly as modeled will Medicare realize savings. Such a demonstration is all that the law requires for granting a waiver. In fact, HCFA remains extremely skeptical that there will be savings in New Jersey, pointing to two main factors that are likely to preclude savings:

- New Jersey has in the past seemed susceptible to pressures from providers to grant appeals and to make other regulatory changes that blunt the cost containment aspects of the system; and
- New Jersey's estimates are based on the currently effective PPS regulations and do not account for possible changes in the PPS regulations--such as a reduction in the market basket factor, a freeze on PPS payments, or a change in the progression toward national rates, all of which are serious possibilities during the Fiscal Year 1986 budget-making process.

HCFA points out that the projected savings of $231 million represent only five percent of estimated Medicare payments over the next three years and that such savings could be reduced or eliminated by either of the above factors.

As a consequence of this skepticism and of the prodding of OMB, which was heavily involved in the waiver approval process, HCFA will implement an extremely tight concurrent monitoring system. This system allows HCFA, through the intermediaries, to track the amount that Medicare would have actually paid had New Jersey hospitals been reimbursed under PPS. This amount will be compared on a quarterly basis to the amount projected and actually paid by New Jersey. According to the terms of the waiver, any significant deviation will result in the commencement of Medicare payment on the basis of PPS rates.

It is also important to note that the form of the new waiver is different from that of the old waiver: the previous waiver included a cap calculated on the overall rate of growth of Medicare expenses; compliance under the new waiver is measured in terms of the absolute dollar amount that Medicare would otherwise have paid. Since New Jersey's Medicare costs are below the national average, this change in waiver: provisions makes the compliance test slightly less stringent than a rate of growth test and underscores the commitment of the current administration to achieving greater uniformity in national hospital rates.[7] It is also worth noting that hospitals generally supported the waiver application, even though it was premised on a lower growth rate than would have been the case under PPS. This suggests strong support for the equity aspects of the system and, possibly, a belief that the rate-setting approach is more likely to protect hospital viability than are competitive approaches.

7.2.4 Summary of Medicare Impacts

At this point, it seems likely that Medicare paid more than it would have paid under the SHARE system, though it may have paid less than the upper limit estimated by the cap methodology included in the original waiver. However, HCFA questions whether the cap methodology is an adequate measure of what HCFA might otherwise have spent. HCFA's skepticism is particularly directed at 1984, when New Jersey rates increased sharply although national rates were starting to fall because of the introduction of PPS. The new

[7] The same could not be said of some other currently waivered states --such as Massachusetts, which has costs considerably above the average. A change in the waiver compliance measure from a rate of growth to an absolute cost level would cause a major reduction in the amount of Medicare funding in Massachusetts.

waiver was granted to New Jersey on the basis of the state's ability to develop a model that predicted Medicare savings, but it is closely circumscribed by a monitoring system that will replace the New Jersey DRG system payments with PPS payments if New Jersey deviates significantly from the expenditures projected under their revised waiver application.

7.3 Impact on Medicaid Expenditures

Medicaid, like Medicare, is less concerned with payer equity than with the DRG system's year-to-year impact on its budget. But Medicaid is a state program and accordingly must act within the constraints of the total political environment of the state. Since the political leadership of New Jersey--both executive and legislative--has consistently supported the DRG system, Medicaid has adapted to the DRG system.

Interestingly, however, virtually no attention has been given to the expenditure impact of the DRG system on Medicaid. Almost all attention has been focused on Medicare. For instance, the Medicaid program did not make a complete waiver submission for either waiver but merely "piggy-backed" on the Medicare waiver requests.

The lack of independent Medicaid waiver applications is primarily a reflection of the lack of independent policy attention to Medicaid's role in the DRG program. It is apparently Medicaid's position that the DRG program is DOH's responsibility and out of Medicaid's hands. As a consequence, Medicaid has undertaken little analysis of the cost impacts of DRGs, nor has it

collected such data as would allow analysis.[8] Medicaid contends, however, that the costs of DRGs are greater for Medicaid than were its costs under SHARE--since the DRG rates include a share of uncompensated care, working cash infusions, and some additional capital expenditures, none of which was included under SHARE.

Available Medicaid-specific data suggest that the rate of growth in Medicaid expenditures under DRGs has probably been higher than the rate of growth in Medicaid expenditures nationwide. Exhibit 7.3 compares rates of increase in expenditures per enrollee for the New Jersey Medicaid program with the national average. New Jersey's rate of growth was slightly lower than the national average during the SHARE period and was higher after the onset of the DRG system.[9]

It is not surprising that Medicaid costs are relatively higher under DRGs than under SHARE since the SHARE arrangement was very favorable for Medicaid. Indeed, one of the premises of DRGs was that Medicaid, and all other payers, should share in the total financial burdens of hospitals rather

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[8]The data presumably exist -- both at the Medicaid agency's fiscal intermediaries and at DOH -- but since Medicaid appears to have never requested relevant data (e.g., cost per admission from 1979 to 1984 by DRG cohort; days by DRG cohort; Medicaid outliers; Medicaid services by DRG) neither of these agencies has produced anything like the kind of analytical file produced by the California Medicaid agency for monitoring the activities of the California Medical Assistance Commission. So, although the data exist, accessing them would require a major data construction effort.

[9]Data on New Jersey total expenditures and per recipient expenditures generally show similar trends after the onset of DRGs but also indicate higher rates of growth during the 1976 to 1979 period:

	1976-1979		1979-1981		1981-1983	
	NJ	US	NJ	US	NJ	US
Total Expenditures	15.0%	13.2%	11.1%	13.0%	13.2%	10.5%
Expenditure Per Recipient	12.3%	12.0%	17.2%	11.2%	12.2%	11.1%

Exhibit 7.3

Comparison of National and New Jersey
Medicaid Inpatient Expenditures Per Enrollee, 1976 to 1983

	New Jersey	United States[a]
1976	$170	$224
1977	193	265
1978	210	297
1979	255	343
1980	278	384
1981	307	415
1982	391	466
1983	444	529
Average compounded annual rate of growth:		
1976-1979	14.5%	15.3%
1979-1983	14.8%	11.4%

Source: HCFA 2082, Special Report by Health Economics Research to Abt Associates.

[a]Total expenditures divided by total enrollees.

than let commercial and private payers bear an extremely disproportionate share. If one accepts these terms, the real question is whether savings have been achieved across all payers without causing Medicaid to absorb a disportionate amount. Setting aside the question of whether there were savings across all payers, there remains the question of what determination should be made as to whether Medicaid's increased share of total financial requirements is "too large" a share. There is no definitive answer to this kind of question, but two general conceptual standards might be advanced:

- Comparison of total expenditure per enrollee in New Jersey with the national average total expenditure per enrollee: because this comparison relies solely on the absolute dollar amount, it implicitly includes any reductions in the base made as a result of the SHARE system.

- A more stringent test is to compare actual expenditures per enrollee to the amount that would have been expended had pre-DRG expenditures increased at the same rate as expenditures in other Medicaid programs.

Both of these comparisons can be made with the data Exhibit 7.3. The data show that New Jersey Medicaid inpatient costs per enrollee, even at the beginning of the SHARE program, were substantially lower than national average costs and remained stable through the implementation of the DRG program, although this may be related to the fact that New Jersey does not have a Medically Needy program. On the other hand, during the SHARE program per enrollee costs increased less slowly than national costs, but with the advent of the DRG system New Jersey Medicaid inpatient per enrollee costs grew

at a rate substantially in excess of the national rate of growth.[10] Thus, it appears that Medicaid was unable to make up the additional expense items with an otherwise slower rate of growth than the national average. Nevertheless, per enrollee costs are still lower than the national average.

7.4 Nongovernment Payers

Nongovernment payers are at least as concerned about relative expenses as they are about the absolute level of expenses. Their main concern is to maximize market share, and relative cost is more important than absolute cost in this regard. Hence, commercial insurers, from the beginning, were major advocates of the DRG system because it addressed their relative disadvantage under SHARE. Under SHARE, the differential between commercial insurers and Blue Cross was as much as 30 percent by 1979 because Blue Cross was not subject to the cost-shifting pressures created by uncompensated care and government payers.

This section considers issues of both absolute and relative expense from the perspectives of Blue Cross and the commercial insurers. The section first considers cost impacts directly and then examines the impacts of various operational issues on Blue Cross and commercial payers. For a contextual

[10]Note, however, that different results would be obtained if, instead of calculating the average expenditure increase with all enrollees weighted equally, the average were calculated with each state weighted equally. During the pre-DRG period, not allowing the size of a state to influence the average rate of growth resulted in an average growth rate only slightly different than did weighting by state size (14.8% versus 15.3%). In the period after 1980, however, the unweighted and weighted averages diverged sharply, with the the national weighted average equaling 11.4% and the unweighted average equal to 17.1%. This suggests that growth rates in large states were substantially below growth rates in smaller states. New Jersey's rate of growth during the DRG period was less than the unweighted average, so a question of whether New Jersey Medicaid grew faster than the national average depends in part on how that average is calculated.

perspective, the nongovernment payer distribution of New Jersey hospital revenues in 1982 is as follows:[11]

New Jersey Blue Cross	43%
Commercial/other	33%
Self-pay	12%
Other Blue Cross	12%

As can be seen, Blue Cross predominates in the nongovernment market.[12]

7.4.1 Nongovernment Payer Cost Impacts

At the time of the 1984 waiver submission, both Blue Cross and the commercial payers indicated their support for the DRG system. It appears, however, that the impact of the program on these two payers is very different.

Blue Cross. Blue Cross personnel have taken the position that it is premature to make a quantitative assessment of the impact of the DRG program on their costs. They cite the long phase-in process and the unknown impact of rebasing as the reasons for this uncertainty. According to New Jersey Blue Cross, the lag in hospitals coming onto the system and the large number of reconciliations for previous rate years make the system much less prospective than is commonly thought. Blue Cross actuaries believe that reconciliations from the phase-in period have continued to affect rates through at least 1984.

Preliminary Blue Cross data through 1983, subject to the caveats noted above, is presented in Exhibits 7.4 and 7.5. Exhibit 7.4 compares the

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[11]Nongovernment payers accounted for 51 percent of 1982 total hospital revenues (Roy Kaptein, "Impact of DRGs on Blue Cross of New Jersey," New Jersey Blue Cross, June 4, 1984).

[12]Ibid.

Exhibit 7.4

Blue Cross Cost Per Admission, New Jersey and Nationwide
1979-1983

	U.S. Blue Cross Plans	N.J. Blue Cross Plans
1979	$1345	$1212
1980	1518	1316
1981	1794	1517
1982	2078	1694
1983	2334	1938
Average rate of growth:	14.8%	12.5%

Source: National: Blue Cross Association (telephone); New Jersey: Kaptein, New Jersey Blue Cross, "Impact of DRGs on Blue Cross of New Jersey," June 4, 1984.

Exhibit 7.5

New Jersey Blue Cross Cost Per Admission, by DRG Cohort
1979-1983

	1st Cohort		2nd Cohort		3rd Cohort	
	$/admission	% change	$/admission	% change	$/admission	% change
1979	$1209	--	$1179	--	$1262	--
1980	1317	8.9%	1271	7.8%	1386	9.8%
1981	1597	21.3%	1423	12.0	1538	11.0
1982	1772	11.0%	1629	14.5	1679	9.2
1983	1950	10.0%	1803	10.7	2128	26.7
Average Annual Growth - All Years:	12.7%		11.2%		14.0%	
Years Under DRG:	1980-1983		1981-1983		1982-1983	
Average Annual Growth - Under DRG:	12.7%		12.4%		17.6%	

Source: Kaptein, New Jersey Blue Cross, op. cit.

rate of increase in cost per admission for New Jersey to the rate of increase for Blue Cross Plans nationwide from 1979 to 1983. As can be seen, the absolute levels of cost per admission are consistently lower in New Jersey than for other Blue Cross plans across the nation. Moreover, the annual rate of growth during that period was 2.3 percent less in New Jersey than the national Blue Cross average (12.5 percent versus 14.8 percent).

There are two facts that must be kept in mind about these figures. First, they include the costs to New Jersey Blue Cross of including a proportional share of uncompensated care in their payments, an expense item not previously incurred. Thus, the rate of growth is not solely a function of hospital cost increases but is also a function of a policy decision to redistribute the burden for uncompensated care in New Jersey. This makes the apparent savings that much more impressive.

A second consideration is that the savings estimates are somewhat sensitive to the timing of hospitals' phasing into the DRG system. Exhibit 7.5 shows cost per Blue Cost admission by DRG cohort and reveals a large increase in cost per admission during the second year of a hospital's participation in the DRG system. For instance, in the first cohort, the phase-in effect is felt between 1980 and 1981 (when cost per admission increased by more than 20 percent from $1,317 to $1,597), even though these hospitals were phased into the system in 1980. This second-year spurt is

followed by a return to a much lower rate of growth.[13] Examining the growth rate under DRGs for the first two cohorts, which had four and three years, respectively, of experience under the DRG system, it appears that the rate of growth in cost per admission for those years (12.7 percent and 12.4 percent, respectively) is still materially lower than the national rate of growth (14.8 percent--see Exhibit 7.4) for the same years. Thus, it seems reasonable to speculate that the high growth rate in the third cohort will be smoothed out over the subsequent years.

In short, the tentative conclusion is that the New Jersey DRG system--through 1983--created a system that allowed Blue Cross to assume a share of uncompensated care and still experience per admission growth rates at or slightly below the national average. However, until the 1984 results are included in the analysis, it will be difficult to determine the longer-range effects of the DRG system on New Jersey Blue Cross.

In addition to lower than national growth rates in cost per admission, Blue Cross admissions per 1,000 subscribers in New Jersey have declined at virtually the same rate as Blue Cross admissions per thousand nationwide.[14] This suggests that the DRG system has not stimulated Blue Cross admissions, which, if it were to happen, could undo the effects of lower costs per admissions.

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[13]As discussed above, Blue Cross officials believe this lag is due to the difficulty of getting hospitals actually billing under the DRG system. Consequently, first-year data may not fully reflect the costs of being under the DRG system. The question is whether the costs for the second (and third) years include sufficient reconciliations backward to reflect the full cost of participation in the DRG system. It will probably require two or even three more years of data to answer that question.

[14]Between 1979 and 1983, national Blue Cross admission rates per 1,000 subscribers declined by 1.6 percent annually while New Jersey rates per 1,000 subscribers declined by 1.7 percent annually.

Other Payers. Commercial insurers, the largest block of other payers, have strongly supported the New Jersey DRG system. While this may be partially related to a lower rate of absolute cost growth, the major reason surely lies in the dramatic shift in their relative competitive position vis-a-vis Blue Cross. As will be shown in subsequent sections, the DRG system appears to be responsible for a reduction in the rate of growth in charges below the rate of either costs or net revenue, and thus for improving the relative market position of charge-payers. Consequently, those payers who were not formerly under SHARE appear to be the biggest winners under the DRG system.

Unfortunately, data for payers other than Blue Cross are unavailable, and it is therefore impossible to examine directly the impact of this system on their costs.

7.4.2 DRG Operational Issues for Nongovernment Payers

There are two important operational issues that concern non-government payers--cost shifting within DRGs and differentials among payers. The commercial insurors and Blue Cross are generally allies on the issue of cost shifting and opponents on issues of payer differentials.

Cost Shifting within DRGs. Concerns about cost shifting within DRGs arose prior to the onset of the DRG system. In 1979 Blue Cross threatened active opposition the system, in part because it contended that the flat rates for patients within DRGs would result in the over-allocation of costs to Blue Cross. Their assumption was that, within any given DRG, Medicare patients would require more resources (because age would increase that portion of acuity that was not measured by DRGs--particularly for nursing intensity) and that therefore payment of a flat rate per DRG meant that Blue Cross was paying

too much and Medicare too little.[15] To placate Blue Cross, it was agreed that charges to individual patients would continue to be recorded and that, at some time in the future, there would be a reconciliation of differences in resource consumption among payers within DRGs. Because of the enormous data processing problems involved in operationalizing such a reconciliation--plus, perhaps, the danger to the Medicare cap--such a reconciliation has never been attempted (although the regulation remains in effect), and DOH has no specific plans to undertake such a reconciliation.[16]

Both Blue Cross and the commercial insurers, however, are dissatisfied with the lack of reconciliation, and both feel that some steps should be taken to develop a meaningful reconciliation process. A spokesperson for a major commercial carrier in New Jersey said:

> We would really like to see a reconciliation process. We don't care if its going to take five years to get to the get point where reconciliations can be done, but we would like to see meaningful progress in that area because we think it is a real problem.

Medicare and some other observers have doubts about the extent of the alleged cost shift, particularly since using 1982 revisions in the DRG classification scheme. They cite the large number of DRGs in which there is branching by the age of 65 with the result that some of the DRGs incurring the greatest Medicare cost are virtually Medicare DRGs. In this instance, as in many other

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[15] In the proceedings of the National DRG Conference, a Blue Cross spokesman argued that, based on length of stay analysis, the use of an average cost per case caused a six percent increase in Blue Cross costs (Fred Koehler,"Impact of DRGs on Blue Cross of New Jersey," Diagnosis-Related Groups: The Effect in New Jersey; The Potential for the Nation, HHS-published Conference Proceedings, 1984; p. 141).

[16] This should not be confused with the hospital year-end reconciliation, which reconciles the hospital's total revenue cap with the hospital's actual experience in terms of volume, payer mix, casemix, and economic factors. The hospital year-end reconciliation is in fact carried out on a hospital-specific basis each year.

cases, the replacement of the original DRGs with the revised version may have greatly ameliorated an earlier problem. To the best of our knowledge, no one has developed data to simulate the effect of such a reconciliation on New Jersey Medicaid.[17]

The question of a payer reconciliation is symptomatic of a fundemental question that has plagued the DRG system from the start: Given the importance of the overall revenue cap, is it necessary that each rate actually be paid on a DRG basis? As discussed in Chapter 4, the alternative position is that the specific rates could be used to make year-end adjustments and, in the interim, hospitals could issue charges to each case--which could later be reconciled to the overall revenue cap. The latter approach, the use of "controlled charges" for actually paying rates, would remove the problem of payer reconciliations entirely. Variations in charges within each DRG would automatically account for variations in length of stay or other intensity of resource consumption issues--at least to the extent that charges actually reflect these variations in resource consumption.[18]

Use of "controlled charges" would also ease the problem of DRG-determined rates, which differ significantly from the hospital charges. Even

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[17]An investigation of this topic has, however, been conducted in New York with the original DRG system of 383 DRGs. This showed a substantial difference between Medicare and other payers within DRGs but no major difference between Blue Cross and Medicaid. It is not possible to say how valid these results would be with the new DRG system (Suzanne Martin, Alexander Frick, Michael Schwartz, "An Analysis of Hosital Case Mix, Cost and Payment Differences for Medicare, Medicaid, and Blue Cross Plan Patients Using DRGs" Inquiry 21:369-379, Winter 1984).

[18]In general, the Medicaid agency believes it would benefit slightly from the use of controlled charges--since some of the alleged cost shift from Medicare would be included in their DRG rates. DOH, on the other hand, believes that controlled charges would result in greater costs to Medicaid because, they believe, Medicaid patients in fact consume more charges within each DRG.

though the revised DRG system and the changes in trim points have greatly ameliorated the problem of disparity between particular DRG rates and charges, problems continue to arise, primarily among self-payers and insurance companies with small market penetration.

Payer Differentials Provisions for granting differentials to various payer groups were built into the DRG system from the beginning. These differentials would allow payers to pay somewhat less than the stated DRG rate.[19] Both the level of the differentials granted and the methodology for calculating those differentials have been a subject of controversy.

At the time of the first hearing on the payer differential issue before the Hospital Rate Setting Commission (HRSC), Blue Cross presented evidence arguing that it was entitled to a differential based on the following elements:

- Incurred Bad Debt--Blue Cross claimed its enrollees created less bad debt than enrollees of other insurance plans due to greater first dollar coverage in Blue Cross and fewer copays and deductibles than in commercial plans.

- Administrative Practices--Blue Cross claimed its administrative practices were more efficient than those of commercial insurers and other payers and, as a consequence, a lower share of administrative costs should be allocated to Blue Cross than to other payers.

- Averted Bad Debt--Blue Cross claimed its enrollment plans offered coverage to certain segments of the population that would otherwise not be eligible for insurance coverage and would therefore increase the amount of bad debt; in essence, Blue Cross was seeking a subsidy for insuring people who, they alledged, would otherwise have difficulty finding insurance.

[19]As discussed earlier, the shortfall thus created is taken into account at the time the DRG rate is created. In other words, the stated rate is "marked up" in such a way that the gross DRG rate includes sufficient revenue to cover all hospital outlays in the face of discounts to some payers. That is, the discounts to some payers are shifted to other payers.

- Prompt Pay--Blue Cross claimed its prompt payment practices helped hospitals meet their working capital requirements without resorting to working capital debt.

In early 1980, the HRSC found that Blue Cross was entitled to a differential of 4.05 percent on the following grounds:

- 1.4 percent as a subsidy for Blue Cross's use of community rating for individual subscribers, a practice felt to make individual insurance more affordable to those whose circumstances that would prevent them from affording insurance from other insurers.
- .89 percent on the basis of accounting and administrative practices.
- 1.76 percent on the basis of lower bad debt than incurred by other payers.

Blue Cross, however, felt this was not sufficient and continued to press its case. In the meantime, partially as a result of the transition to DRGs and the resultant need to pay (for the first time) a share of uncompensated care, Blue Cross sought a premium increase in small-group and individual rates of almost 45 percent. While this rate increase was pending, Blue Cross continued its pressure for a larger differential with the strong support of the New Jersey Commissioner of Insurance (who is also a member of the HSRC). In mid-1981 the HRSC revised its previous order to increase the Blue Cross differential to 6.18 percent, retroactive to January 1, 1981. The entire increase was linked to the the community rating subsidy. Subsequently, a rate increase of 26 percent was allowed, but Blue Cross still experienced a $4.2 million deficit in 1981. Blue Cross received another rate increase in early 1982 of almost 20 percent. However, as rates stabilized, Blue Cross cancelled an individual subscriber rate filing scheduled for 1983; and in 1984 it filed for a rate increase but, in part because of high reserve levels, did not receive an increase until February 1985, when it received a 12.9 percent increase.

During the first three years of the DRG implementation, there was continuing controversy as to how the stated differentials should be calculated. DOH used one method from March 1981 to August 1981; then, in September 1981 it adopted a different method, which had been put forth by a Blue Cross consultant. Not surprisingly, the second method was more favorable to Blue Cross and touched off another long round of discussions and negotiations. Almost one year later, in early 1982, DOH and HRSC agreed on yet a third methodology. This methodology was very similar to the original methodology and negated the advantage that Blue Cross had previously gained.

The commercial insurers are particularly interested in obtaining some review of the differential issue but have not pressed their case recently because, according to an HIAA spokesperson, they were devoting their efforts to preserving the waiver. HIAA, however, hopes for a resurrection of a study group appointed to undertake a comprehensive review of the differential issue. This group never seriously considered the issue of resolving the differential disagreements between Blue Cross and the commercial insurers.

7.5 Aggregate Expenditures and Costs

The New Jersey system is explicitly all-payer in concept and design. If one is to judge an all-payer system on its own terms, one appropriate evaluation considers the overall system expenditures and cost impacts. Under an all-payer system, any payer who would otherwise have monopsony leverage might lose that leverage in the interest of system equity. To the extent that the distribution of payments among payers represents an a priori policy decision, the cost impact of an all-payer system on individual payers is less important.

On the other hand, there remains what might loosely be referred to as an efficiency issue. Individual payers exerting monopsonistic power might actually have a greater effect on the aggregate costs of a system than does an all-payer system. The substantial impact of SHARE on aggregate costs is an extremely relevant example. Although SHARE applied only to Blue Cross and Medicaid, SHARE resulted in substantial decreases in both Medicare and aggregate costs.[20] This occurred because individual payers had neither legal nor political responsibility for determining the aggregate impact of their actions on hospitals and were consequently willing to make rate decisions sufficiently extreme that they had an impact on costs throughout the hospital system.

Regardless of one's position on the relative importance of equity vis-a-vis cost containment, it is necessary to determine the trade-offs associated with a particular system. In other words, does equity have some cost over what might be achieved by allowing individual payers to pursue their own strategies? If so, how great is that cost?

Unfortunately, the data for making precise determinations on this issue are at present lacking. Calculations require multivariate analysis that takes into consideration several factors such as changes in the age of the population, points of entry into the New Jersey DRG system, subsequent reconciliations, and so forth. In the interim, however, it is useful to examine aggregate data as long as the above caveats are kept in mind.

Aggregate annual AHA data suggest that the system apparently created savings when measured against the rate of increase in costs nationwide between

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[20] M. Morrisey, F. Sloan, and S. Mitchell. "State Rate Setting: An Analysis of Some Unresolved Issues," Health Affairs, Vol. 2, No. 2, Summer 1983. Note that this effect was, in part, achieved at the expense of deterioration in the financial positions of many New Jersey hospitals.

1979 and 1983.[21] It is uncertain however, that these "savings" evolved as the system continued through 1984. Although final data have not been collected, it is probable that the 1984 rebasing erased whatever savings were made between 1979 and 1983 in relation to national rates.

Exhibit 7.6 compares New Jersey's and the nation's rate of increase in hospital expenditures and revenues between 1979 and 1983, particularly the change in per capita net hospital revenue. The data show that rates of growth in hospital expenditures and revenue were slightly lower under the New Jersey DRG system than for the nation.

At the same time, note the striking differences between the net and gross per capita revenues. The rate of gross revenue per capita revenue increased 3.7 percent less annually than net revenues and 5.9 percent less annually than the national increase in gross revenues per capita. This suggests a dramatic shift in the costs from charge payers to non-charge payers, including the government payers.[22]

In short, between 1979 and 1983, there were no obvious losses in cost containment capacity due to enforcing equity rather than allowing individual payers to pursue their own methods. Moreover, the adoption of the

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[21]An issue that must be addressed as part of a more detailed analysis is the extent to which the national average is an appropriate comparison, since New Jersey had lower than national average cost growth during the period immediately prior to the introduction of the DRGs. One might argue that the appropriate comparison is a projection of what would have been expected had that trend been continued. On the other hand, one might equally well argue that, since the pre-DRG trend was a product of the SHARE system, that comparison would have the effect of holding New Jersey to a stricter standard than other states because New Jersey had a previous cost containment program.

[22]During this period net revenues as a percentage of gross revenues increased from 71.3 percent to 81.1 percent. This was directly opposite the national trend which saw net revenues as percent of gross revenues decrease from 83.1 percent to 78.2 percent.

Exhibit 7.6

All-Payer Expenditure and Revenue Statistics for Nation and New Jersey Community Hospitals, 1979-1983

	Total Expenditures[a] ($000)		Expenditures Per Admission[a]		Total Gross Revenue Per Capita[b]		Total Patient Net Revenue Per Capita[b]	
	New Jersey	United States	New Jersey	United States	New Jersey	United States	New Jersey	United States
1979	$1,961,604	$ 66,003,741	$1,672	$1,641	$351	$342	$250	$284
1980	2,263,069	76,851,146	1,850	1,851	403	395	285	326
1981	2,543,325	90,572,422	2,061	2,171	436	464	324	380
1982	2,926,344	104,875,624	2,335	2,501	480	543	383	439
1983	3,258,801	116,437,675	2,491	2,789	516	620	419	485
Average Annual Rate of Increase	13.5%	15.2%	10.5%	14.2%	10.1%	16.0%	13.8%	14.3%

[a]From AHA Hospital Statistics, 1980-1984, Table 5.

[b]From AHA Hospital Statistics, 1980-1984, Table 11; and U.S. Census, "Estimate of the Population of States: 1970 to 1983," No. 957, October 1984, p. 25.

DRG system apparently improved hospital fiscal conditions in the state, particularly for several inner-city hospitals whose financial viability was threatened. It also allowed for the creation of a medical school in New Jersey with the attendant hospital cost increments. On a preliminary basis, then, it would appear that the New Jersey experiment has fulfilled the goals it set for itself for the period from 1980 to 1983.

However, when allowance is made for the effect of rebasing in 1984, there is a very strong possibility that these "savings" over the national rate will be erased. Simulations on revenue per capita were performed using various assumptions about the impact of 1984 rebasing in New Jersey and using national AHA Panel Survey data. These simulations strongly suggest that the impact of rebasing was sufficiently large that, over the entire 1979 to 1984 period, New Jersey hospital revenue per capita growth would not be appreciably different from national growth rates and might, in fact, be slightly higher.

It is useful, however, to consider the apparent causes of the increases in per capita cost. Return to the comparison of New Jersey and national costs per admission for all payers for the years 1979 to 1983, shown in Exhibit 7.6. The difference between New Jersey and the nation is much larger than the difference over the period in net per capita expenditures. Indeed, the difference is sufficiently large that, even after making allowances for the 1984 rebasing, it is likely that the cost per admission statistics will still show a lower rate of growth than national cost per admission statistics. This suggests that the growth in New Jersey per capita hospital net revenue has been greatly influenced by a higher rate of admission than the national rate. Admission per capita figures shown in Exhibit 7.7

Exhibit 7.7

New Jersey and National Admissions per 1,000
1979 to 1983

	New Jersey	United States
1979	139.5	156.3
1980	145.6	159.5
1981	145.6	159.9
1982	145.8	158.1
1983	151.2	155.6
Average Annual Rate of Increase (Decrease)	2.0%	<0.1%>

Source: AHA Statistics 1980 to 1984, Table 15; and U.S. Census, "Estimate of the Population of States: 1970 to 1983" No. 957, October, 1984, p. 25.

Note: This table is based on admissions in New Jersey hospitals divided by New Jersey population. No adjustments are made for in- or out-migration for hospital care.

bear out that New Jersey admissions per capita grew at a higher rate than the national average.[23]

Two important factors, however, should be considered in regard to the apparent rate of growth in New Jersey admissions per capita. First, there is no evidence for an inevitable relationship between DRGs and admission increases. Recall that Blue Cross data showed that its admission rate declined at roughly the same rate as the national average of Blue Cross plans during this period. A second consideration is that per capita admissions in New Jersey were considerably below the national rate prior to DRGs. The growth in admissions has made New Jersey comparable to the national rate. Part of the initially lower admission rate may have been due to significant migration of hospitalization to New York or Pennsylvania. Apparent growth may simply be a tendency for residents to receive more hospital care within the state.

Alternatively, the growth in hospitalization may simply be a function of demand for hospitalization somehow "pent up" by the SHARE program. This latter interpretation is lent some plausibility by efforts to determine the payer source for the additional admissions. Blue Cross per capita admissions were declining during this period. Medicare per enrollee

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[23]Findings of the National Hospital Rate-Setting Study vary somewhat from the analysis suggested here. Using multiple regression analysis, that study finds that both total and per capita admissions in New Jersey did not increase at a rate significantly different from the national rate of increase during 1980 and 1981. It is apparent from inspection of the raw data that part of those results stem from differences in the manner in which admission rates are allocated to specific years. While the aggregate AHA data employed here show a major increase between 1979 and 1980, the Medicare cost report data used by the National Hospital Rate-Setting Study show the same trend to have taken place between 1978 and 1979. Unfortunately, 1981 is the last year for which individual hospital data are available from Medicare cost reports, so it is impossible to compare the two sets of results over a longer period affected by DRGs.

admissions increased at a higher rate than the national Medicare average, yet the rate is still lower than the difference between the all-payer growth rates for New Jersey and the nation. Medicaid numbers suggest very high per enrollee growth rates, but these rates seem due almost entirely to the elimination of working AFDC enrollees after the OBRA changes rather than to any increase in hospital admissions per se. Thus, although no direct data are available for consideration of the issue, the circumstantial evidence suggests that the increase in the rate of admissions was disportionately large for commercial insurers, self-payers, and those dependent on charity care. These are all groups whose demand would likely be inhibited by the SHARE system, which allocated a greater share of costs to commercial payers and which made no direct provisions for uncompensated care.[24]

The data are much too tenuous to support a firm conclusion in this regard, but it is sufficient to suggest that evaluation of increases in admission rates, and hence increases in per capita expenditures, must go beyond any simple relationship between DRG incentives and admission increases. One might, for instance, evaluate an increase in per capita admissions resulting from increased availablity of hospital care to poor people differently from an increase resulting from an across-the-board increase in per capita admissions.

7.6 DRGs and Alternative Health Plans

HMO growth in New Jersey has been somewhat slower than in the rest of the nation, as can be seen in Exhibit 7.8. Representatives of the New

[24]The uncompensated care issue is particularly important in New Jersey, since New Jersey has no Medically Needy program, which might provide protection for those individuals above the grant level for AFDC or SSI who nonetheless experience large medical bills.

Exhibit 7.8

HMO Enrollment Per 1,000 Population, Selected States
July 1983

California	193
Connecticut	38
Maryland	19
New Jersey	26
New York	66
Pennsylvania	25
Ohio	34
U.S.	54
U.S. excluding California	37

Source: Bureau of the Census, "Population Estimates of the States," HMO Enrollment, Inter Study Population, October 1984, .25.

Jersey HMO industry contend that the DRG system dampens their growth incentives. As discussed above, New Jersey uses DRG rates that pay a flat rate per admission based on the patient's diagnosis rather than on billed charges. This flat rate is in essence the average charge for patients with a particular diagnosis. Historically, HMOs gained part of their economic advantage from carefully managing the hospital stay of patients, so that HMO patients incurred lower charges than members of other health plans with the same diagnoses. Two important elements of the HMO approach were lower lengths of stay and greater reliance on preadmission testing than was the case for conventional fee-for-service patients. Under DRGs, however, both these advantages are diluted because of the averaging feature of DRGs and because the effect of the reduced costs accrues to the hospital, not to the HMO.

Although HMOs are allowed to apply to the HRSC for differentials--and several of them received differentials of 1.76 percent--HMO officials contend that this is not sufficient to offset the loss resulting from forced payment of average charges for what they contend are consistently less than average expenses. Data presented by four of the state's HMOs to the HRSC showed that in 1982 these four HMOs had paid 18.3 percent more than they would have had they paid the charges actually incurred in treating their members. The HMO officials claimed that part of the difference in charges was due to consistently lower lengths of stay for HMO members. However, without data comparing lengths of stay within DRGs, it is difficult to validate this claim.

Data estimated from a New Jersey report on the status of HMOs suggest that hospital expenditures grew by about 12.8 percent annually between 1980 and 1983 for those HMOs with available data. During the same period, gross revenue per admission for New Jersey hospitals grew only 6.7 percent annually. This result strongly suggests that HMOs were disadvantaged by the

shift from payment on controlled charges to payment on a DRG basis.[25] On the other hand, these data also show a marked increase in HMO admission per thousand over the same period. While this may be due to increasing enrollment of Medicare and other more difficult patients, it also shows that New Jersey HMO cost increases are affected by other factors.[26]

DOH believes that the impediments to HMOs created by the DRG system are overstated. DOH points out that HMOs have historically gained more of their savings by reducing the number of admissions rather than by reducing lengths of stay. Potential savings from avoiding admissions are as strong as ever in the DRG system.

Likewise, administrators of the DRG system have more generally argued that the system is not an obstacle to competitive plans, be they HMOs or PPOs.[27] However, a recent document prepared for DOH Commissioner Goldstein by the New Jersey Center for Health Facilities Research on the future of the DRG system has concluded that a major priority for the state is to review

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[25]Statistics derived from the "Status Report on New Jersey Health Maintenance Organizations," Alternative Health Systems Program, New Jersey DOH, November 1984. Data include all HMOs with sufficiently consistent data to derive statistics of interest over the entire period; these include HMOs accounting for 76 percent of HMO enrollment in 1980 and for 67 percent in 1983. The above calculations make no adjustments for whether newborns were included in some figures and not others. This inconsistency undoubtedly influences the exact numbers but does not affect the trends. (Gross revenue per admission figures calculated from AHA Hospital Statistics.)

[26]HMO enrollment in New Jersey has shown a remarkable increase in the last half of 1983 and the first half of 1984.

[27]Preferred Provider Organizations (PPOs) are contractual arrangements between providers and an insurer that allow for reduced charges to the insurer in return for other considerations, usually inducements to the insured to use the preferred provider. In other words, these are arrangements in which the provider reduces charges in the hope of increasing volume.

existing regulations and make whatever changes are necessary to encourage the growth and development of alternative delivery systems.[28]

7.7 Conclusions on Payer Impacts

At this point, it appears that Medicaid is paying more than it would have under SHARE and that commercial and self-payers are paying proportionately less than under SHARE. It also seems probable that New Jersey's overall per admission expenditures are below the national average. The impacts of the system on Blue Cross and Medicare are less clear, and the impacts of DRGs on the all-payer per capita rate of net hospital revenue growth is very unclear. If it turns out that the rate of per capita hospital revenue growth was higher than the national rate of growth, the cause will almost certainly be the increase in the rate of admissions rather than in the rate of cost per admission. However, the rate of admission growth is uneven across payers and may not be directly related to perceived incentives in DRGs.

On balance, it would seem that claims of either great savings or great problems are excessive. From the state's point of view, the DRG system allowed the state to achieve certain policy objectives with regard to equity among payers and the financial health of inner-city hospitals without appreciably affecting the aggregate rate of growth. Most would view this as a significant accomplishment. On the other hand, to the extent that equity among payers was achieved by allocating greater costs to the federal government, the federal government is likely to take a dimmer view of the system. This, in turn, illustrates an inherent difference between New Jersey

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[28] L. Rosen, S. Fillebrown, and N. Weisfeld, On the Frontier: New Perspectives on New Jersey's Hospital Payment System, Center for Health Facilities Research, February 1985.

and federal goals, a difference that will be addressed as far as Medicare is concerned by the terms of the new waiver. The real test of the New Jersey system, therefore, will be in the coming years rather than in the years recently elapsed.

CHAPTER 8

CONCLUSION: LESSONS FROM THE NEW JERSEY EXPERIENCE

The New Jersey experiment with DRGs is one of the most interesting reimbursement innovations in the country. It is interesting in part because New Jersey was the first state to try DRGs and consequently has more experience with DRGs than does any other state. It is also interesting because New Jersey sought to serve an unusual set of objectives when it instituted DRGs, and managed substantially to achieve those unusual goals.

Thus, the fact that New Jersey did not achieve sizeable Medicaid savings does not by itself render the New Jersey effort a failure. Unlike most other states implementing new reimbursement schemes, New Jersey was not primarily seeking substantial Medicaid savings. New Jersey's principal goals--payer equity and the financial condition of inner-city hospitals--made cost savings improbable and gave New Jersey a system-wide responsibility that other states' more restricted efforts, focused on cost savings, could avoid. Previous chapters show that New Jersey was not entirely successful in its efforts, as administrative problems manifestly persist in the state's reimbursement system. But the state did achieve payer equity and improve the financial conditions of inner-city hospitals, without--it is at least fair to say--a large increase in Medicaid expenditures. That is a considerable achievement, even if some agencies, like HCFA, find it more qualified than do agencies in the state.

Both the problems and the achievements merit some reflection. In this final chapter, we will highlight the most important lessons of the New Jersey experience. We will contrast that experience, as appropriate, with the experience of California and Illinois, two states that implemented very

different reimbursement innovations, with very different purposes and results, than New Jersey sought. The lessons of the New Jersey experience can perhaps most sharply be posed as a series of somewhat overstated propositions.

1. New Jersey did not have to reduce its Medicaid inpatient budget, and its DRG method was not designed to do so.

We are accustomed to thinking of DRGs as a cost reduction device to squeeze new efficiencies out of hospitals. The New Jersey experience underscores that DRGs need not be devices for efficiency--they can be designed as allocation devices, with concern for cost control to be sure, but with a far greater emphasis on allocation than on reducing the size of the (Medicaid) pie.

This report discusses preliminary results. A second report[1] echoes the results presented here: New Jersey's DRG method did not yield a significantly different rate of growth in Medicaid spending, by comparison to states that applied Medicaid cost reimbursement (pre-PPS) principles. That would constitute a disappointing result if Medicaid cost reductions were the point of the New Jersey exercise.

In fact, notwithstanding the rhetoric that accompanied the effort, it seems clear that New Jersey sought only secondarily to reduce Medicaid expenditures. New Jersey's DRG formulae could have been stringent, with systematic external cost standards to coerce changes in hospital behavior. Instead, as implemented, these formulae are--on issue after issue--designed to accommodate hospital-specific characteristics. Not surprisingly, our hospital sample showed no hospital for which operations were substantially disrupted by the reimbursement levels DRGs provided. If DRGs were actually intended to squeeze

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[1]Cromwell Jerry, and Sylvia Hurdle, "National Impact Study of Alternative Medicaid Reimbursement Waivers, Second Year Report," Health Economics Research, Inc., Needham, MA (March 1986), MPE Paper No. 3.6.

efficiencies out of the system, some sign of at least transitional disarray would be corroborative. Instead, the only disarray appears to have been the minor administrative learning process necessary for hospitals to manage rate-setting, not the learning process necessary to manage new, more efficient forms of care.

All of this seems to be a result of the circumstances under which DRGs were adopted and implemented. Most important, New Jersey was not in the position of a California or Illinois--New Jersey did not face a Medicaid budget crisis. New Jersey's SHARE program had done a good, albeit administratively complex, job of controlling Medicaid costs. (For example, New Jersey's Medicaid hospital expenditures per recipient were below the national average prior to the start of the DRG program in 1980.)[2] New Jersey faced a crisis of a different sort: hospitals providing most of its indigent care were in financial distress. In addition, commercial payers chafed under the favorable disparities (i.e., the lower inpatient reimbursement rates) Blue Cross enjoyed under the SHARE system. DRGs were one way, but certainly not the only way, to address these problems. However, the Commissioner of DOH was an ardent supporter of the DRG method. HCFA was also particularly interested in it. Since DRGs could in principle achieve the reimbursement allocations DOH sought, along with possible new efficiencies, the use of DRGs among all the feasible

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[2]Hospital expenditures per recipient remained below the national average until the 1984 rebasing in New Jersey:

	1976	1978	1980	1982	1984
New Jersey	$1,044	$1,289	$1,592	$2,294	$3,035
California	1,187	1,632	1,863	2,462	2,895
Illinois	1,177	1,671	2,072	2,240	2,126
U.S.	1,130	1,337	1,762	2,198	2,539

Data from Cromwell and Hurdle (1986), Table C-2.

prospective methods was at least natural, if not inevitable. Key actors (e.g., hospitals, DHS, and the insurers) either supported or were divided in their opposition to the new program--for all its apparent cost containment success, or perhaps because of it, SHARE had few strong supporters. As a result, the politics of DRG adoption were manageable.

A lot of political and administrative energy is required to revamp hospital reimbursement systems. In many states, crises have proved the necessary catalyst. The nature of the crisis has set the agenda for reimbursement reform. In New Jersey, the crisis, and the reform agenda, had less to do with the growth of Medicaid expenditures than with disparities among payers and hospitals. New Jersey's previous cost control efforts gave the state financial latitude to remedy those disparities. The state's DRG program did not accomplish any major cost reductions; but in attending to payer and hospital disparities, it was a substantial, relatively unqualified success.

2. The details of the pricing formulae are of more practical importance than the mere fact that DRGs are the unit of reimbursement.

Most classifications of hospital cost reimbursement systems tend to define the systems in such terms as the unit of reimbursement. However, when a state chooses a reimbursement system, the choice of whether the reimbursement system is, say, DRG-based or something else may not be that important in terms of how hospital costs are actually generated and the degree to which the costs are reimbursed. It may not be that important in terms of Medicaid budgets. Other choices, typically second in sequence and less conspicuous in consideration, may matter far more. Consider that the DRG (or any other prospective) formulae:

- can be stringent, with few hospital-specific components and an extensive set of unbending external standards of efficiency; or

- can be accommodating, with minute attention to hospital-specific variations.

At the same time, these formulae can be joined to administrative requirements--like utilization review--that further strengthen their effects.

Thus, any reimbursement method (including DRGs) can be sufficiently generous to accommodate the status quo of hospital behavior. Or the method may be more stringent and coerce hospitals to change their behavior in particular ways. Or, in the extreme, the method can present hospitals with the prospect of disaster unless the hospitals change radically across the board. The choice that state officials make about how stringent to be is likely (across much of the range of choice) to have greater effects than the unit of reimbursement. Note that in New Jersey, the DRG formulae contained weak incentives for cost containment: the formulae excluded outlier cases, recognized hospitals' own historical costs, provided capital expense pass-throughs, and so on. These accommodations were more important in determining the overall expenditure results than the fact that New Jersey happened to use DRGs to structure the accommodating formulae.

To be sure, more stringent formulae would give hospitals an incentive to respond more conspicuously to the unit of reimbursement. For example, more stringent DRG formulae might induce hospitals to "game" DRGs more extensively than did New Jersey hospitals. Then, we might well see the unit of reimbursement taking on the economic importance commonly attached to it. But New Jersey presents an important caution to casual economic theorizing: hospital behavior did not change significantly (except in ways, like capital spending, that any reimbursement scheme could be designed to encourage). DRGs in New Jersey appear to have been designed to reconcile reimbursement to existing hospital operations, rather than to change hospital behavior. The state's choices in

implementing DRGs turned out to be more important than the choice to adopt DRGs.

3. The choice of which payers to include in a reimbursement scheme may be more important than the scheme itself.

In a similar spirit, the choice of which payers to include in a reimbursement scheme may have a greater influence on the outcomes than the scheme itself--other things being equal. Many different reimbursement schemes could in principle have achieved the approximate allocation New Jersey required to remedy payer inequities and inner-city hospital finances. DRGs per se were not the only way to achieve that allocation. However, it would have been difficult to achieve New Jersey's purposes without including all of the state's payers in the system.

Note the character of the evaluation throughout this report: all-payer effects are repeatedly categorical; DRG effects per se are most often subtle, indirect, and qualified. For example, the all payer structure New Jersey adopted:

- reduced Medicaid's (DHS') influence in any event;
- made it possible to reduce shifting among payers and allocate costs of unreimbursed care;
- gave DOH responsibility for system-wide costs, and levers to influence those costs as it chose.

These attributes of the New Jersey system go to the heart of what the new reimbursement scheme accomplished. By contrast, the DRG unit of reimbursement affected how hospitals monitored costs and, to a limited degree, how hospitals specialized their services. Even these DRG-related effects, however, seem dwarfed in their impacts by other attributes of the formulae that were matters of choice and not inescapably required by the DRG unit of reimbursement (such as the generous coverage of capital spending and uncompensated care).

Obviously, had the DRG formulae in New Jersey provided more powerful incentives, the results might have been different. But without knowing how powerful the incentives needed to be, we can at least argue that the New Jersey experience was insufficient to demonstrate the compelling effects of using DRGs as the unit of reimbursement. As with the stringency of the formulae, the inclusion of all payers seems to have been more important in New Jersey than the conspicuous fact of DRGs.

4. States must embrace a clear philosophy of who is to bear what risks and ensure that that philosophy is consistently implemented in all the activities that influence hospital costs.

Reimbursement schemes are only one part of the larger process that determines the cost of providing hospital services. That larger process will not spontaneously mesh with a reimbursement scheme--certainly not with a new reimbursement scheme. States must have a clear idea how the various parts of the larger process are to fit together to achieve the desired allocation of risk. Failure to do so serves to undermine whatever the nominal incentives that the reimbursement scheme, standing alone, is thought to establish.

These difficulties are repeatedly evident in New Jersey's experience. Note the following examples of problems New Jersey faced in coupling its DRG scheme to:

a. HMOs--Arguably, the state should encourage the growth of HMOs and other forms of managed care, given the rising hospital admission rate the state has experienced. However, the DRG system may in fact have discouraged the growth of HMOs. The reason is simple: HMO patients may have relatively short lengths of stay on average; yet HMOs currently must pay the all-payer average to hospitals, thereby granting to hospitals the length of stay savings formerly captured by HMOs. While the facts are disputed, a substantial empirical and regulatory effort would be necessary to confirm what the appropriate incentives should be. Such efforts are not yet evident in New Jersey.

b. Medicare and Medicaid--The bundling of services and supply charges per admission under DRGs in New Jersey may not well match the peculiar structure of accumulated rules and arrangements to control costs in programs like Medicare and Medicaid. To take one small example, Medicaid's direct agreements to acquire durable medical equipment at favorable prices were voided by New Jersey's DRG system. This change made the hospital the prudent buyer of such supplies. The costs are now bundled into the DRG rate as trailer charges on the hospital bill. Medicaid pays more for these rebundled services than they paid for the services under SHARE.

c. Certificate of Need (CON) Process--The CON process limits capital investment by hospitals. The underlying premise is that a rate setting system will inevitably pay for whatever capital is in place. A pure DRG system, in contrast, embraces the philosophy that hospitals should be free internally to allocate their own resources, but that they must live within the revenues awarded by the DRGs. In New Jersey, the pure DRG philosophy was modified to impose no constraints on capital costs, on the grounds that the CON process would oversee the appropriate allocation of capital. However, the CON process in fact imposed few constraints, approving applications as if the DRG rates imposed an inherent and adequate discipline. The result has been an ambiguous philosophy of reimbursement: hospitals must live within their rates for the reimbursement of labor and materials, but their major capital investment decisions appear to have been undisciplined and fully reimbursed. A consistent philosophy of reimbursement for all inputs would require the elimination of the CON process and the inclusion of capital costs in the DRG rates, to give hospitals clearer incentives for efficient behavior. If the CON process is not eliminated, better coordination with the rate-setting process would at least impose more discipline on capital spending.

Such problems as these result from the need to view rate-setting as one part of a larger process that determines health care reimbursement costs. Aggressive conceptual and administrative efforts are required to ensure that linkages to that larger process are consistent with the goals of rate-setting. DRGs import some peculiar problems, as DRGs require that a per-admission methodology be mapped onto a system long organized around per diem methods of payment. Moreover, DRGs are administratively difficult by them-

selves. Managing all of these linkages constitutes a considerable additional task (a task that should moderate over time, however, as states acquire more experience with DRGs). Be that as it may, the failure to work out all of these linkages can produce, as it did in New Jersey, a combination of actual incentives that conflicts with the imagined incentives of the DRG process.

5. Active, innovative state roles in hospital reimbursement--and especially the centralized regulatory role DRGs require--strain the normal administrative capacities of state government.

A frequent remark throughout this report raises a serious caution for all state governments taking activist roles in hospital reimbursement: those active roles place heavy demands on administrative (particularly personnel) resources that are scarce in state government. This is especially true where, as in New Jersey, the state has taken on a system-wide pricing responsibility with an administratively intense rate-setting process. Efficient administration is particularly difficult, and the costs of poor administration will be felt system-wide.

The difficulty in New Jersey appears clear. Before the SHARE program, New Jersey, like most states, maintained a relatively passive role in hospital reimbursement. Notwithstanding its formal powers, state government had relatively few affirmative purposes it actively sought to realize through the rate system and relatively modest responsibility for the results.

The new environment of reimbursement regulation changed all of that. The state acquired substantial responsibility for the fortunes of the system, and a large agenda of affirmative purposes. As is often the case in states--more often than commonly credited--New Jersey was able to bring a cadre of bright, professional administrators to DOH, under Commissioner Joanne Finley, to embark on this more substantial role. Through the difficulties of the SHARE program and the inauguration of the DRG effort, New Jersey could rely on

a staff whose energy and talents were widely recognized. As the program continued, however, staff moved on and the administration of the program receded back to the norm. Administration became routinized, bureaucratized. When new staff became skilled in the rate-setting system, they were--in a matter of months--hired away by the regulated hospitals.

It is obviously self-serving for hospitals to cream the state's administrative talent, but then to complain of the inexperience or lack of talent in those who remain. But whatever the equities of the hospitals' complaints, the state faces a serious problem. DRG systems impose a particularly heavy administrative load on the state, as previous chapters make clear: subtleties of formulae and effects of past actions must be continually managed and improved; base rates must be computed; cost studies must be performed to update DRG factors; and incentive problems in everything from "DRG creep" to capital spending and the reduction of uncompensated care must be evaluated and remedied. Meanwhile, the state does not have independent discretion to appraise the costs and benefits of effective admninistration: HCFA could disestablish the entire system, for Medicare at least, if its increasingly strict standards are not met. Yet the standard administrative arrangements of the state--notably the personnel system--constrain the ability of New Jersey to administer the program effectively.

California and Illinois faced an analogous problem for the more episodic administrative demands of selective contracting. Both states circumvented their civil service systems to ensure quality personnel: in California by establishing an independent authority, and in Illinois by hiring independent consultants. New Jersey could in principle do the same, although--absent a crisis--it is politically difficult to argue that this state function is of such unique importance as to justify special personnel status. Perhaps HCFA

could play an important role, by creating incentives for states to upgrade reimbursement personnel. In any event, a state contemplating DRG-based systems would do well to consider carefully New Jersey's difficulties in routinizing administration. DRGs place a premium on administration, and it is a premium most states would find difficult to satisfy.

6. Beware the federal-state conflict in an all-payer system.

State aspirations to implement DRGs have not created any notable conflicts with the federal government--if anything, these aspirations have been a source of harmony with the federal government, given Medicare's commitment to DRG methods. But an all-payer system as implemented in New Jersey creates specific conflicts, as it burdens Medicare and Medicaid with expenses that these two programs might otherwise avoid. First, these two programs take on a proportionate share of uncompensated care costs. Under other arrangements, Medicare and Medicaid can avoid some or all of this expense. Second, the all-payer system implicates Medicare in the particular DRG formulae New Jersey has chosen, rather than the more stringent PPS formulae.

Arguably, the federal government should assume these costs, rather than deflect them one way or another to the state. Whatever the merits of that argument, however, the federal government has substantial discretion to avoid the costs, and an administrative waiver process through which it can use that discretion to coerce the state. Waiver negotiations between HCFA and New Jersey became progressively more demanding as the New Jersey program evolved. The most important concern has been HCFA's desire to tie New Jersey's reimbursement process to a PPS standard, and to monitor New Jersey's performance against that standard. New Jersey now will have to demonstrate Medicare savings, in terms of the particular methodology of calculation HCFA

and the state have negotiated. Failure to satisfy the standard could undo New Jersey's all-payer system--a result that would necessarily change how New Jersey's experience to date is interpreted or appraised.

It is obvious to all states, whatever their reimbursement process, that HCFA's choices in the years ahead will have profound influence on the fortunes of their hospitals and their reimbursement systems. California, for example, faces the prospect of hospital failures if Medicare funding is substantially reduced. But the all-payer scheme New Jersey has adopted--a key to the success New Jersey's scheme has had--creates a unique source of conflict for that state with the federal government and makes New Jersey more vulnerable to federal discretion. That conflict and vulnerability are perhaps the price for success, given New Jersey's goals to remedy payer inequities and the deteriorating finances of inner-city hospitals. But any state that embarks on a similar program should be aware of how fragile success might be.

7. In sum, the New Jersey experience argues that states considering new reimbursement schemes should move beyond abstractions like the unit of reimbursement and evaluate alternative schemes in terms of the detailed formulae and processes that rate-setting actually involves.

The most important lessons of the New Jersey experience revolve around the relative unimportance--as it happens--of the unit of reimbursement. Reimbursement schemes are not crisp sets of incentive signals, embodied in abstract summary characteristics like the unit of reimbursment. The New Jersey experience suggests that processes of implementation, decisions about the details of formulae, and the constraints imposed by other actors like the federal government are where the actual incentives--and the success or failure--of the new scheme may be determined. As they implemented their DRG program, New Jersey officials may have thought they were creating a system that would change hospital behavior. But the choices they made along the way

served in fact to reinforce the status quo. While the state's choices are arguable, they are certainly consistent with the reasonable objectives the state sought to satisfy. Other states that follow New Jersey should look to these other choices, not simply to the basic DRG structure, to understand their own prospects for success or failure.

APPENDIX

Interview Protocols

Hospital Interview Protocol

Background

1. Check background information--ownership, beds, board membership/control.

   - o Distribution of revenues, days of services by type of payer--SHARE vs. DRG.
   - o Verify DRG start date.

Implementation

1. Do you feel that the DRG system, in general, is a reasonable method of allocating costs?

   Do you consider DRGs adequate for rate-setting purposes?

   Do you consider the system to be an equitable one?

   How does this apply to your hospital?

2. Do you feel that DRGs, generally, are sensitive to, and appropriately reflect, patient care categories?

   Is this true at your hospital?

3. Were casemix, cost, and other data at your institution adequate for setting initial rates?

   for MRUs (Measures of Resource Use)?

   If not, were you satisfied with the state's rate-setting methods/practices?

   What data did you have/not have that you needed?

   How much lead time were you given to establish data systems for the DRG system?

4. Do you feel that the choice of base year (1979) is appropriate, for the NJ hospital industry?

   for your hospital? (PROBE)

   Do you find current trending proxies/indices to be "fair and reasonable?"

If not, what would be a better index?

How do you view "ratcheting down," that is, changes in efficiency from 1979 to the present, under the DRG system?

5. Do you think the appeals process is reasonable?

PROBE: length of time for resolution; borrowing funds (interest) etc.

Have you used this process?

If yes, for what sorts of problems?

Who, from your hospital, was involved in the appeals process?

6. Prior to implementation of the DRG system did you anticipate benefits or problems for your hospital, or for the hospital industry, in any of the following areas:

- o different classes of payers
- o direct costs of operating the system
- o assignment of costs to DRGs (mapping)

What do you see as incentives and/or strategic behavior (i.e., gaming) associated with the system?

Implementation: Operational

1. Phasein--your hospital was phased into the DRG system during the (1,2,3 wave). Did you volunteer or were you assigned a phasein date?

If volunteer, what prompted your hospital to volunteer?

2. Were any special preparations/reorganizations effected prior to implementation of DRGs?

Did you enlist assistance from consultants or outside groups?

Who inside the hospital was involved?

3. During the transition from SHARE to DRGs, did your hospital encounter any special problems or obstacles?

4. Did you feel the DRG system was adequately explained/addressed by the Department of Human Services?

5. If there were any problems, what were they?
6. Have you encountered any particular operational or billing problems under the DRG system?

   If so, what were these and how have they been addressed?

7. What have been the effects of the DRG system on administrative costs in the following areas:

   - management
   - data processing
   - Quality Assurance
   - medical records
   - fiscal and patient billing costs
   - UR committee

8. Were staff prepared for the shift to the DRG system?

   (PROBE: financial director, medical records, administrators, patient billing supervisors)

   How were they told about the change to DRGs?

   (PROBE: formal/informal training?)

   Were staff sufficiently knowledgeable about procedures and requisite changes?

Hospital Organization

1. What organizational and procedural changes have been made to accommodate DRGs?

   (PROBE: departmental, cost control efforts, etc.)

2. What changes have been made to improve: (PROBE each)

   - data systems
   - utilization review
   - cost control
   - Quality Assurance

What software system do you use?
How are data used by your hospital?

3. What procedural or operational policies are in effect at your institution in any of the following areas, related to DRG phasein?

- LOS monitoring
- DRG monitoring
- controls on ancillary usage
- changes in nursing practice
- changes in budgeting procedures (especially departmental)
- changes in supply ordering or usage
- other (admission date, preadmission testing)

How have these been altered since implementation of the DRG system at your hospital?

Have DRGs prompted any changes?

4. What changes have been made in payroll and staffing concerning:

- mix of staff
- salary/benefit levels
- rates of increase in payroll costs

5. Have there been any notable changes in the focus of treatment at your hospital, i.e., a greater or lesser number of certain procedures?

opening or closing of beds or departments?

6. Have there been changes in hospital board approved activity?

Has the focus of board responsibilities or concerns changed with DRGs? [responsibilities, new issues that board deals with]

7. What changes can you identify concerning:

- the hospital's relationship with physicians and other staff
- education about DRGs (PROBE: phasein, during, future activities)

8. How, that is, at what level, are cost containment strategies developed?

   - administrative
   - physicians/chiefs of staff

9. How have utilization review activities changed under DRGs?

   PRO activity?

10. Have you initiated any cost incentives for specific departments within your hospital?

Financial Status

1. How have DRGs affected your hospital's

   - costs
   - revenues
   - expenditures

2. Some hospitals reduced their charges when moving to the DRG system, for a variety of reasons, including avoiding penalties for excessive cross subsidization, overcollection, and others. Did your institution alter charges when moving on to DRG reimbursement?

   Why or why not?

3. Have changes in trimpoints affected revenues at your hospital?

   What percentage of your cases are outliers? (PROBE)

4. How have DRGs affected HMO or PPO development/contracting activity?

5. Has the implementation of the DRG system affected purchases of new equipment? New and/or expanded services? How are these decisions made?

6. Has the change to the DRG system affected short- and long-term financing activity at your hospital?

If so, how?

If yes, what steps are being taken to address these issues?

7. How have DRGs affected your hospital's bad debt/charity care?

Patient Impacts

1. How have DRGs affected patient treatment or access?

Have there been noticeable changes with respect to services provided to Medicaid patients?

Self pay?

Other payer groups?

(PROBE: length of time on system)

2. Has your overall casemix changed as a result of DRGs?

Have you noted changes in Medicaid casemix?

Have degrees of severity within case types changed?

Why do you think so? (PROBE: verify)

3. What changes have been observed in:

- number of total/Medicaid admissions
- LOS
- ancillary usage
- treatment setting

4. Have you experienced difficulties in making referrals for services your hospital does not provide?

transfers?

availability of specialized services?

5. Have you conducted/analyzed patient satisfaction questionnaires? (PROBE)

6. Can you document any significant improvements or adverse consequences which you would attribute to DRGs?

7. Have efforts been made to inform/educate patients and the community about the DRG system?

   If yes, when?

   What did you do: prior, during (e.g., marketing efforts, outreach, seminars, etc.)

8. Given the threat that New Jersey may lose its federal waiver, what do you see as the future for DRGs? (PROBE)

PRO Protocol

1. How have PRO activities changed from the SHARE system to DRGs? (organization, authority, operations/procedures)

2. What activities does the PRO currently undertake?

   (PROBE: disclosure and review, etc.)

   What procedures or protocols are used?

3. Are any educational training sessions or programs being offered to assist physicians and/or hospitals in understanding the DRG system and its implications for clinical practice?

4. Have you noted any changes in medical practice patterns which are attributable to DRGs?

5. Have you noted changes or shifts in utilization, or practice setting?

6. Have you seen indications of changes in quality of care or access for patients under DRGs--overall, or for different categories of patients? (Medicare, Medicaid, BC, other) Can you document these changes? (anecdotally or quantitatively)

7. Do you feel the PRO system, as it presently operates, is a satisfactory mechanism for review of provider activity under DRGs? Why or why not? (PROBE: adequacy of budgets, staffing, greater or less review requirements)

8. Are you satisfied with PRO contracting activities? (PROBE)

9. Do you feel PRO's have sufficient authority or influence to adequately monitor patient care under DRGs?

10. Were there special problems encountered for PROs during the transition from SHARE to DRGs?

11. Could you identify any particular problems during the transition period?

12. Have you encountered specific hospital problems? What kind? With whom?

13. Do you believe that the incident reporting and general quality monitoring procedures are sufficient to protect clients?

14. Do you have any recommendations for other programs or states which are moving to, or currently on, DRG reimbursement?

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